STATE OF MONTANA
DEPARTMENT OF TRANSPORTATION
BID PACKAGE

Sealed bids for construction of this project will be received by the Montana Department of Transportation, Construction Contracting Bureau, Room 101, 2701 Prospect, Helena, Montana until 9:00 a.m. on December 8, 2022. All bids will then be publicly opened, reviewed for correctness, and then publicly read.

Federal Aid Project(s):

CRSII-STPB 29-1(64)17	Granite Creek 3 Miles Northwest of Virginia City

Bid proposals, Plans, Standard Specifications, Detail Drawings, and Standard Contract Forms are on file for examination and may be obtained from the Construction Contracting Bureau of the Montana Department of Transportation, 2701 Prospect Avenue, P.O. Box 201001, Helena, Montana 59620-1001.

Prime bidders use the Electronic Bid System or bid on-line through Bid Express to produce a bid containing Proposal Forms, Schedule of Items, and Disadvantaged Business Enterprises (DBE) Requirements (if applicable).

CONTRACT #02C22
AWARDED ON: DECEMBER 20, 2022
TO: MISSOURI RIVER CONTRACTORS, LLC

MONTANA DEPARTMENT OF TRANSPORTATION

Loran Frazier, Chairperson
Montana Transportation Commission

Malcolm “Mack” Long
Director of Transportation

Contract No.02C22
SEH:MH:8932000AWD-101

AWARD COPY

CURRENT QUESTIONS & ANSWERS

101 - GRANITE CREEK 3 M NW OF VIRGINIA CITY - December 08, 2022

Notifications
No Notices available for this project.

Addendums
No Addendums available for this project.

Clarifications
-1-
Submitted: Thursday 10-NOV-2022 02:50 PM
This project is being re-advertised. Changes may have been made to the prior bid package. If you submitted a question when this project was previously advertised and believe your question is still applicable, please ask the question on the Q&A forum again. By doing so, your question and MDT's corresponding answer will become part of the contract.

-2-
Submitted: Wednesday 07-DEC-2022 11:55 AM
Special Provision #25 Coordination with Adjacent Stream Restoration Project and Work Sequence and Special Provision #26 Bioengineered Bank are hereby replaced with the following Special Provisions: **UPDATED SPECIAL PROVISIONS 25 & 26** **(See end of Q&A)**

Questions
-1-
Submitted: Friday 18-NOV-2022 10:36 AM
Company: SK Geotechnical
Contact: Dustin Hutzenbiler
Our firm performed the geotechnical evaluation for the project. Would it be acceptable for us to quote the contractors for dynamic load testing?
Answer
Submitted: Friday 18-NOV-2022 10:55 AM
Yes, it is acceptable.
-2-
Submitted: Tuesday 22-NOV-2022 03:51 PM
Company: True North Steel
Contact: Amanda McCulloch
For Bid Item 603 010 080 - 66in CMP - Can 5x1 corrugation be used?
Answer
Submitted: Wednesday 23-NOV-2022 07:40 AM
If the cover requirements outlined in the Road Design Manual are satisfied, the substitution of the 5x1 corrugation for the 2 2/3 x ½ corrugations is acceptable.

CURRENT QUESTIONS & ANSWERS

Exhibit 11-9 Structural Requirements for Corrugated Steel Pipe (CSP) (Welded or Lock Seam)

5" x 1" Corrugations ① *Welded or Lock-Seam Steel Pipe*						
Pipe Diameter (in)	Minimum Fill Height* (in)	Maximum Fill Height* (ft) Metal Thickness (in)				
		0.064	0.079	0.109	0.138	0.168
54	18	48	60	84	109	133
60	18	43	54	76	98	120
66	18	39	49	69	89	109
72	18	36	45	63	82	100
78	18	33	42	58	75	92
84	18		39	54	70	85
90	18		36	51	65	80
96	18			47	61	75
102	18			45	57	70
108	18			42	54	66
114	18				51	63
120	18				49	60

* Minimum fill height is measured from the top of the pipe to the top of the rigid pavement or to the bottom of the flexible (plant mix) pavement. Maximum fill height is measured from the top of the pipe to the point of maximum cover, including the total surfacing thickness.

For all pipes less than 84", the top of the pipe should be located a minimum of 0.3 feet below the bottom of the surfacing subgrade. For all pipes 84", and larger, the top of the pipe should be located a minimum of 1.0-foot below the surfacing subgrade.

Notes:

① Fill heights based on suitable backfill (granular material) and foundation conditions. Consult the Geotechnical Section for special backfill/foundation requirements when wet and/or unsuitable in-place soil conditions exist.

② 5"x1" corrugations are not typically used; however, in some instances, manufacturers may recommend 5"x1" corrugations in order to provide polymeric coating on thicker gage pipes.

-3-
Submitted: Wednesday 30-NOV-2022 05:03 PM
Company: Rinker
Contact: Mike Meredith
Can the NTP be extended to allow for production schedules of bridge beams similar to Belfry project?
Answer
Submitted: Friday 02-DEC-2022 01:05 PM
The NTP will remain as advertised due to the timing and coordination requirements of the contract. Alternate prestressed beam sections may be provided as outlined in Special Provision #39.
-4-
Submitted: Friday 02-DEC-2022 09:15 AM
Company: Helena Sand & Gravel
Contact: Loren Blossom
Special provision #47 says "Both lanes of Highway 287 must remain open to public traffic during completion of the contract."

CURRENT QUESTIONS & ANSWERS

Does this only apply when no work is taking place? When work is being done can the work zone be flagged and single traffic allowed?
Answer
Submitted: Friday 02-DEC-2022 01:45 PM
Single lane traffic will be allowed for all work taking place at the roadway connections and placing the temporary concrete barrier rail. The concrete barrier rail is being placed to provide positive protection allowing two-way traffic to remain on the PTW for the duration of the project. The newly constructed roadway slopes behind the temporary barrier rail will be completed after all traffic is placed on the new roadway and bridge after temporary barrier rail is removed. Single lane traffic will be allowed during construction as approved by the Project Manager.

-5-
Submitted: Friday 02-DEC-2022 03:33 PM
Company: Missouri River Contractors
Contact: Kris Anderson
Plan sheet B8 shows 28' spacing between beams 2&3 and 4&5. Is this accurate?
Answer
Submitted: Monday 05-DEC-2022 07:46 AM
Spacings shown on Plan Sheet B8 between beams 2&3 and 4&5 is incorrect. The correct spacing is 7'-0". **UPDATED PLAN SHEET B8**

-6-
Submitted: Monday 05-DEC-2022 09:09 AM
Company: Helena Sand & Gravel
Contact: Loren Blossom
It appears that the bridge girders will not be available until late fall of 2023. Contract time will nearly be gone by this time. Once the girders are received there will be months of work to complete the project. Can time be added to the project to allow for completion in summer of 2024?
Answer
Submitted: Tuesday 06-DEC-2022 04:50 PM
Additional time will not be added.

-7-
Submitted: Monday 05-DEC-2022 09:10 AM
Company: Dick Anderson Construction
Contact: Ashley Davis
Regarding MDT's reply to question #3 and Special Provision #39's reference - would steel plated girders or steel rolled shapes be allowed or will only prestressed beam sections that do not increase the superstructures depth be considered?
Answer
Submitted: Wednesday 07-DEC-2022 11:10 AM
Weathering steel girders would be an acceptable alternative. Special Provision #39 Alternate Prestressed Beam Sections is hereby replaced with the following Special Provision: **UPDATED SPECIAL PROVISION 39** **(See end of Q&A)**

-8-
Submitted: Monday 05-DEC-2022 09:30 AM
Company: Helena Sand & Gravel
Contact: Loren Blossom
The PI specification for A-1-a material is 6 max. Much of the local material available for use for special borrow has a PI greater than 6. Can the PI specification for special borrow be waved or increased to 10?
Answer
Submitted: Tuesday 06-DEC-2022 07:25 AM
The requirement will not be waived. Provide the material specified in the Contract.

CURRENT QUESTIONS & ANSWERS

-9-
Submitted: Monday 05-DEC-2022 09:38 AM
Company: Frontier West
Contact: Craig Lien
General Layout and Foundation Plan lengths note 70'-0" sloped distance and 69'-11 1/2" horizontal distance. Both dimensions appear to be horizontal distances with one being a ground distance and one being grid/ state plane. The curve adds the confusion. Are both dimensions ground per the State Plan Coordinates plan note, with one of them measuring the sloping distance and one horizontal as noted on the plans?
Answer
Submitted: Wednesday 07-DEC-2022 08:45 AM
69'-11 1/2" is a grid distance. A revised sheet B2 is provided for clarification. **UPDATED PLAN SHEET B2**

-10-
Submitted: Monday 05-DEC-2022 09:33 AM
Company: Frontier West
Contact: Craig Lien
Assuming dimensions D in the transverse section on sheet B8 is measured from top of deck to top of beam, there is not adequate haunch to keep the beam flange out of deck because of camber. Please confirm 2" or so of flange projection into deck is acceptable. If flange embedment is not acceptable, please clarify approach for adjustments.
Answer
Submitted: Wednesday 07-DEC-2022 08:55 AM
Camber estimates during design were based on preliminary prestressed girder design and preliminary verifications with beam suppliers. Once the final prestressed girder design is completed by the beam supplier and an estimated camber is produced, verification of beam embed allowances will be conveyed to the contractor.

-11-
Submitted: Monday 05-DEC-2022 09:39 AM
Company: Frontier West
Contact: Craig Lien
Please provide the rationale for the 4'-2" deck overhang. We have concerns this will overload the beam line and cause subsequent constructability issues.
Answer
Submitted: Wednesday 07-DEC-2022 08:55 AM
Preliminary prestressed girder design and verifications with prestressed girder suppliers during the preliminary design indicated that the proposed cross-section was acceptable from a girder loading perspective. The 4'-2" deck overhang and the deck top transverse reinforcement complies with LRFD deck overhang design guidelines and has been used successfully on other MDT projects.

-12-
Submitted: Monday 05-DEC-2022 09:41 AM
Company: Frontier West
Contact: Craig Lien
Would a weathering steel girder be an acceptable alternate girder section provided it meets the requirements of the Alternate Prestressed Beam special provision? If acceptable, is it allowable for the steel details to be shown on the shop drawings, similar to the prestressed concrete details and/ or a premanufactured steel truss? If acceptable, please confirm girder beam end painting is not required if abutment details remain unchanged from the MT-28. Deck reinforcing will be updated for the longer deck design span.

CURRENT QUESTIONS & ANSWERS

Answer
Submitted: Wednesday 07-DEC-2022 10:57 AM
Refer to response to Question #7. Girder end painting is not required.

-13-
Submitted: Monday 05-DEC-2022 09:43 AM
Company: Frontier West
Contact: Craig Lien
Sheet B2 section A: We typically see 1' below the top of cap to the ground and a berm. Please verify the grading at the wingwall end to the contours a couple feet in front of the wingwall and confirm no berm and the grading is acceptable. Sheet 18 of the details shows a berm in front of the abutment, but the Elevation view and Section A of the General Layout does not. Which is correct?
Answer
Submitted: Wednesday 07-DEC-2022 09:00 AM
Section A of the Bridge General Layout sheet is a generic detail meant to convey the riprap toe elevation and does not accurately portray the grading at the cap interface. Refer to the road plans for riprap grading details.

-14-
Submitted: Monday 05-DEC-2022 09:44 AM
Company: Frontier West
Contact: Craig Lien
Note on sheet B4 states that beam seats should be finished to match superelevation of the roadway and the elevations listed in the table. Is it intended that the beam seats be finished level or on the slope?
Answer
Submitted: Wednesday 07-DEC-2022 09:05 AM
The beam seats should be level while the superelevation slope results in the haunch depth varying along the haunch width. A revised sheet B4 is provided with the beam seat finishing note deleted. **UPDATED PLAN SHEET B4**

-15-
Submitted: Monday 05-DEC-2022 09:35 AM
Company: Frontier West
Contact: Craig Lien
There is no abutment centerline bearing angle to the long chord or bearing appears obvious on the general layout or foundation plan. Clarify for bridge layout.
Answer
Submitted: Wednesday 07-DEC-2022 09:15 AM
The bridge is square - i.e., no skew angle. The angle between the long chord and the abutment centerline bearing is 90 degrees.

COORDINATION WITH ADJACENT STREAM RESTORATION PROJECT AND WORK SEQUENCE

The Ruby Valley Conservation District (RVCD) is designing and constructing an adjacent stream restoration and realignment project upstream and downstream of the proposed bridge location. RVCD's stream restoration contractor will initiate the stream restoration project in advance of MDT's road and bridge project. Coordinate closely with the RVCD stream restoration contractor on the sequence of construction and connecting the stream restoration work segments together. The following is a tentative work sequence and may change based on the Contractor's own means and methods and coordination with the RVCD stream restoration contractor. The tasks are titled either MDT or RVCD to provide a general indication of the work responsibility. RVCD Contacts; Audra Bell, Stewardship Director (RVCD): 406-842-5741, Jeremiah Theys (Great West Engineering): 406-495-6193.

A. RVCD: Divert creek into relic channel with Granite Creek flowing beneath the existing bridge.

1) RVCD's stream restoration contractor will divert Granite Creek into a historic channel. The point of diversion is upstream of the stream reconstruction area and approximately 500 feet upstream of the new bridge crossing location. Granite Creek will still flow under the existing bridge at this stage.

B. RVCD: At the option of the RVCD contractor, they could rough-in the new channel downstream of the new bridge.

C. MDT: Install temporary 66" diameter culvert beneath the new road location. The temporary culvert is designed to convey the 2-year flow of 124 cfs.

D. MDT: Construct new road and appurtenances.

1) When the Contractor initiates construction, Granite Creek will be flowing in the diverted channel and beneath the existing bridge, and traffic will be on the PTW. Determine a work sequence and traffic control plan to complete the work while accommodating public traffic.

E. MDT: Construct bridge abutments, place riprap and rough-in channel within the construction limits, Channel Station 10+55.83 to approximately 11+25 (except for the segment through the PTW).

F. MDT: Complete bridge and road approaches.

G. MDT: Shift public traffic onto the new road and bridge.

H. MDT: Remove existing bridge.

I. MDT: Extend 66" culvert through existing bridge opening.

J. MDT: Complete construction of Granite Creek Road approach.

K. MDT: Rough-in the remainder of the channel through the PTW, approximate Channel Station 11+25 to 11+70.63.

L. Perform the following activities between October 15, 2023 and April 15, 2024.

1) MDT: Construct the bioengineered bank within the MDT construction limits (live fascines, soil lifts, coir logs and fabric, willow cuttings).

2) RVCD: Construct entire channel upstream and downstream of MDT's construction limits and also make the connection to the MDT channel.

a) Note that rough grading of the downstream channel may have already taken place.

3) RVCD: Turn creek into new channel and restore the point of diversion.

4) MDT : Cut back temporary culvert, as necessary, fill culvert with flowable fill (i.e., controlled low strength material), and bury the ends.

BIOENGINEERED BANK

M. Description. The purpose of this work is the incorporation of revegetation material into the banks of the new channel and constructing the new channel at the new bridge location from Channel Station 10+55.83 to 11+70.63. The work includes channel stabilization and revegetation elements to the dimensions and locations indicated in the plans.

N. Work on the bioengineered bank must take place between October 15, 2023, and April 15, 2024. Refer to the Coordination with Adjacent Stream Restoration Project and Work Sequence Special Provision.

O. Materials. Furnish all materials and equipment required to perform this work. Furnish and install topsoil and native seed mix in accordance with the Riprap Revegetation Special Provision. Furnish and install live fascine, coir logs, wooden stakes, coir netting, high performance rolled erosion control blanket, topsoil, embankment, streambed material, and willow cuttings as indicated on the plans. Embankment and topsoil material utilized in the bank reconstruction to be approved by Project Manager.

1) Topsoil: Furnish topsoil meeting Subsection 713.05.

2) Fascine: Provide conifer and willow bundle fascines constructed from live cuttings as shown on the plans. Cuttings to be ½ to 2-inches in diameter and not less than 4-feet in length. Fascine to be tightly wrapped with untreated, biodegradable jute twine every 12" to 18". Breaking strength of twine to be minimum of 80 lbs.

a) Harvest live cuttings between October 15, 2023, and April 15, 2024.

3) Coir Logs: Furnish coir logs of the following dimensions and technical specifications:

Length	Minimum 10-foot lengths
Diameter/ Unit Weight	12-inch / Min. 7 lbs. per lineal foot
Density	Min 9 lbs. per cubic foot
Wrapping Material	Encased in spun, multiple ply coir twine or yarn
Wrapping Strength	Min. 90 lbs.
Wrapping Mesh Size	2 in x 2 in
Core Material	100% coir fibers, uniformly distributed

4) Coir Netting: Provide coir erosion control net consisting of a woven blanket made from bristle coir twines. Meet the following requirements:

Thickness	ASTM D1777	0.30 in
Tensile Strength (dry)	ASTM D4595	100 x 50 lb/in
Mass Per Unit Area	ASTM D3776	26 oz/sq yd
Open Area	Measured	40% (max)
Roll Width	NA	feet

5) High Performance Rolled Erosion Control Blanket: Furnish blanket meeting Subsection 713.12.

6) Willow Cuttings: Cuttings can be taken from the willows removed by this contract and may also be taken from other live willows within 20 miles of the project site. Coordinate with private landowners when applicable. Collect cuttings within the immediate vicinity of the project site to the extent practical. Collect and provide short term storage of the willow cuttings during the collection period in a manner that preserves their vigor and health.

a) Harvest cuttings between October 15, 2023, and April 15, 2024.

b) Quantity of Cuttings: 2,003 (quantity accounts for a 15% mortality rate)

c) Length: 5 to 6 feet long

d) Cut surface diameter: 0.75 to 1.25 inch

e) Condition: Live, dormant, and freshly cut.

7) Embankment and Topsoil mixture: Mix topsoil and embankment at a 50/50 ratio for placement within the soil lifts as shown on the plans.

8) Streambed Material: Furnish streambed material meeting the following graduation.

Streambed Material Gradation	
Percent Passing	Inches or Sieve Size
100	14”
84	6”
50	2.5”
16	0.75”
10	No. 10

P. Construction Requirements. The contractor and Stream Restoration Specialist will attend a Bioengineering Bank Pre-Work meeting on site to discuss the proposed bioengineering bank work with the District Biologist, Project Manager, and stream restoration contractor from the adjacent RVCD stream project. Notify the Project Manager and Stream Restoration Specialist to coordinate the scheduling of the pre-work meeting no less than 10 working days prior to construction of the bioengineered bank and associated features, as described in condition B.6) of the Stream Restoration Specialist - MDT special provision. Construction equipment, task sequencing, and construction methods will be discussed and finalized before work can commence. All work on the channel improvements must be performed under the direction of the Stream Restoration Specialist. The following tasks, not necessarily in order of work performance, are to be accomplished.

Work on the bioengineered bank must take place between October 15, 2023, and April 15, 2024. Refer to the Coordination with Adjacent Stream Restoration Project and Work Sequence Special Provision.

1) Fascine: Ensure fascine is in contact with the coir netting of the encapsulated soil lift. Lap fascine segments a minimum of 18-inches. Lap the overlapping sections in the downstream direction to prevent the fascine from being dislodged by river flows. Stakes used to secure the fascine to be 30-inches long, untreated 2x4 lumber split diagonally.

2) Streambed material placement:

a) Place streambed simulation material on a prepared surface to form a well-graded, low permeability mass, similar in appearance and texture to the natural streambed.

b) Place stream simulation material in one or more layers with a layer depth not exceeding 6 inches depth. Place stream simulation material by methods that do not cause segregation or damage to the prepared surface. Place or rearrange individual rocks by mechanical methods to obtain a compact low permeability mass. Fill voids before placing the next lift and compact each layer until there is no visible evidence of further consolidation.

3) Coir fiber logs: Place coir fiber logs along the channel bank as shown on the plans.

4) Coir netting and high-performance erosion control blanket: Wrap all encapsulated soil lifts with coir netting and high-performance erosion control blanket as shown on the plans. Longitudinal joints in the coir netting are not permitted. The top lift is to be constructed of a continuous length of fabric. Stake the coir, erosion control blanket, and soil lift as shown on the plans.

5) Willow Cuttings: The Stream Restoration Specialist and Project Manager must inspect and approve all cuttings before installation. Cuttings that appear dead, damaged or visibly stressed will be rejected.

a) Place the cuttings as shown in the plan details to ensure the cuttings are infilled with 100% contact with suitable rooting material (topsoil). Saturate the cuttings/infill material before additional layers of rock infill are placed.

b) Install willow cuttings in bundles of two (2) to three (3), angled as shown in the details, to achieve approximately six (6) willow cuttings per linear foot per row.

6) Submit a plan to the Project Manager for securing the blanket and coir netting following the manufacturer's recommendations. Wooden stakes 18-inch long – nominal 1-inch by 2-inch are to be used to secure the blanket and coir netting. It is important that all edges of the blanket/netting be secured.

7) Hand broadcast seed the native soils prior to placement of the erosion control blanket with the seed blend specified in the Riprap Revegetation Special Provision. Rake the seed into the soil to a ¼ to ½-inch depth after seeding.

8) The RVCD stream restoration contractor is responsible for connecting to the new stream channel upstream and downstream of MDT's work limits.

Q. Method of Measurement & Basis of Payment. Fascine, embankment, topsoil, coir netting, coir logs, wooden stakes, willow cuttings, seed, and erosion control blanket are measured and paid for as Bioengineered Bank lump sum. Payment is full compensation for all labor, tools, materials, equipment, and other incidentals necessary to complete the work in accordance with the specifications and as directed by the Project Manager.

ALTERNATE BEAMS

A. Description

1) General. The contractor may elect to use an alternate structural steel or prestressed concrete beam if the resulting change in superstructure depth is less than or equal to the maximum allowed increase shown in the table below.

Bridge at Station	Maximum Allowed Increase in Superstructure Depth
135+40.48	0'-0"

2) Submittals.

a) Provide two sets of designs that meet the AASHTO and Montana Specifications shown on the Plans, to the Project Manager for review and approval. Show calculations for the beams, slab and reinforcing steel. Provide design information as required to either validate or alter the substructure as shown.

b) Provide five sets of shop drawings to the Project Manager meeting the requirements of either Section 553 or Section 556 of the Standard Specifications. Shop drawings may be submitted on 11" x 17" sheets and may be furnished in Adobe Acrobat Reader (.pdf) format in lieu of hard copies. Have a professional engineer licensed in Montana sign, stamp or seal these plans and designs. Do not fabricate beams prior to receiving approved drawings.

c) Provide a revised set of design drawings showing all changes to the bridge. Prepare the drawings using a CAD system. Submit the drawings in Adobe Acrobat Reader (.pdf) format. Include a cover letter signed by the supervising engineer transmitting the finished drawings. In addition, provide the CAD files used to detail the revisions. Upon request, the original design drawings will be made available.

B. Measurement and Payment. The beam and slab shown on the plans will be the configuration measured or calculated for payment. Furnish and install at no cost to the state any additional beam footage, slab concrete or slab reinforcing steel, structural steel, or substructure concrete or reinforcing steel required because of the use of alternate beam shapes.

MONTANA DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

CONTRACT ID: 02C22

PROJECT: CRSII-STPB 29-1(64)17 (8932064000)
GRANITE CREEK - 3M NW OF VIRGINIA CITY

PROP LINE NO.	ITEM NUMBER	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY
	SECTION 0001 - GRADING, GRAVEL			
0010	104 030 010	MISCELLANEOUS WORK	UNIT	25,000.00
0020	108 000 000	CRITICAL PATH SCHEDULE	LS	1.00
0030	108 000 010	STRUCTURE ANALYSIS	LS	1.00
0040	109 200 005	MOBILIZATION	LS	1.00
0050	202 020 041	REMOVE STRUCTURE	LS	1.00
0060	203 020 310	SPECIAL BORROW-NEAT LINE	CUYD	16,717.00
0070	203 020 375	EMBANKMENT IN PLACE	CUYD	6,670.00
0080	203 020 380	SPECIAL EMBANKMENT	CUYD	3,190.00
0090	208 010 150	TEMPORARY EROSION CONTROL-LS	LS	1.00
0100	208 010 200	TEMPORARY EROSION CONTROL-FIXED	UNIT	500.00
0110	208 010 500	BIOENGINEERED BANK	LS	1.00
0120	210 020 173	COM TRAILER-INSTALL, MAINTAIN, REM	EACH	1.00
0130	301 020 111	SELECT SURFACING	CUYD	292.00
0140	301 020 254	BRIDGE END BACKFILL-TYPE 3	CUYD	898.00
0150	301 020 340	CRUSHED AGGREGATE COURSE	CUYD	2,830.00
0160	301 020 625	AGGREGATE TREATMENT	SQYD	12,258.00
0170	401 020 022	COMMERCIAL MIX-PG 64-28	TON	2,347.00
0180	402 020 315	EMULSIFIED ASPHALT-TACK COAT	GAL	678.00
0190	402 020 375	EMULSIFIED ASPHALT CHFRS-2P	TON	17.50
0200	409 000 000	FINAL SWEEP AND BROOM	CRMI	0.50
0210	409 000 010	COVER-TYPE 1	SQYD	9,796.00
0220	411 011 120	CENTERLINE RUMBLE STRIPS-TYPE 1	MILE	0.50
0230	551 020 035	CONCRETE-CLASS STRUCTURE	CUYD	64.40
0240	551 020 036	CONCRETE-CLASS STRUCTURE LOW SLUMP	CUYD	83.40
0250	551 020 126	CONTROLLED LOW STRENGTH MATL	CUYD	123.00
0260	552 010 140	TRANSVERSE DECK GROOVING	SQYD	317.00
0270	553 010 170	PRESTRESSED BEAM-TYPE MT-28	LNFT	420.00
0280	555 010 100	REINFORCING STEEL	LB	6,730.00
0290	555 010 200	REINFORCING STEEL-EPOXY COATED	LB	16,826.00
0300	557 010 013	BRIDGE RAIL-W830	LNFT	143.00
0310	559 040 035	DYNAMIC LOAD TEST	EACH	2.00
0320	559 050 115	FURN STEEL PILE-PIPE	LB	38,063.00
0330	559 060 115	DRIVE STEEL PILE	LNFT	429.00
0340	559 060 200	PILE CUTTING SHOE	EACH	12.00
0350	603 010 040	DRAINAGE PIPE 18 IN	LNFT	44.00
0360	603 010 048	DRAINAGE PIPE 24 IN	LNFT	352.00
0370	603 010 080	DRAINAGE PIPE 66 IN	LNFT	98.00
0380	603 015 270	EMBANKMENT PROTECTOR 18 IN	LNFT	22.00
0390	606 010 040	GUARDRAIL-STEEL BOX BEAM	LNFT	216.00
0400	606 010 266	GRD RL-BOX BEAM/BR APP-SEC TYPE 2	EACH	4.00
0410	606 010 385	REMOVE GUARDRAIL	LNFT	392.90
0420	606 010 641	GD RL BOX BEAM OPT TERM SEC	EACH	4.00
0430	606 011 518	TEMPORARY IMPACT ATTENUATOR	EACH	2.00
0440	607 100 009	FENCE - WILDLIFE FRIENDLY FW	LNFT	2,168.00
0450	607 100 259	FARM FENCE-TYPE F5W	LNFT	260.00
0460	607 100 360	FARM FENCE-PANEL/SINGLE FW	EACH	2.00
0470	607 100 380	FARM FENCE-PANEL/DOUBLE FW	EACH	19.00

PROP LINE NO.	ITEM NUMBER	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY
0480	607 100 430	FARM GATE-WIRE-TYPE G-2	LNFT	16.00
0490	607 100 440	FARM GATE-METAL-TYPE G-3	LNFT	32.00
0500	607 100 720	DEADMAN	EACH	3.00
0510	609 010 112	CURB 4 IN-CONCRETE	LNFT	39.70
0520	610 010 105	TOPSOIL-PLACE	CUYD	1,637.00
0530	610 100 559	REVEGETATION	LS	1.00
0540	610 100 560	RIPRAP REVEGETATION	SQYD	127.00
0550	613 100 040	RIPRAP-CLASS 2 RANDOM	CUYD	427.00
0560	613 300 050	BANK PROTECTION-TYPE 3	CUYD	3.00
0570	618 030 005	TRAFFIC CONTROL DEVICES CB	UNIT	150,000.00
0580	618 190 100	TEMPORARY BARRIER RAIL	LNFT	2,750.00
0590	619 010 086	SIGNS-ALUM REFL SHEET IV	SQFT	20.40
0600	619 010 090	SIGNS-ALUM REFL SHEET XI	SQFT	5.20
0610	619 010 230	REMOVE SIGN	EACH	8.00
0620	619 010 310	POSTS-STEEL U SIGN	LB	20.00
0630	619 010 480	POLES-TREATED WOOD 4 IN	LNFT	40.00
0640	619 011 010	DELINEATOR DES A	EACH	24.00
0650	619 011 040	DELINEATOR DES D	EACH	2.00
0660	620 013 000	STRIPING-WHITE PAINT	GAL	38.00
0670	620 013 960	STRIPING-WHITE EPOXY	GAL	25.00
0680	620 014 000	STRIPING-YELLOW PAINT	GAL	36.00
0690	620 014 960	STRIPING-YELLOW EPOXY	GAL	24.00
0700	622 011 043	PERM EROSION CONTROL-HIGH SURV	SQYD	680.00
0710	622 011 084	GEOTEXTILE STABILIZATION	SQYD	16,381.00

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SPECIAL PROVISIONS

FEDERAL AID PROJECT NO(S). CRSII-STPB 29-1(64)17

(REVISED 12-08-22)

The following special provisions are hereby made part of the contract and supplement and/or supersede any sections of the Standard and Supplemental Specifications of Road and Bridge Construction, adopted by the Montana Department of Transportation and the Montana Transportation Commission and all supplements thereto in conflict therewith.

The following documents are hereby incorporated by reference into this contract:

- "Standard and Supplemental Specifications for Road and Bridge construction" found at the following link: https://www.mdt.mt.gov/other/webdata/external/const/specifications/2020/SPEC-BOOK/2020-SPEC-BOOK-V3-1.pdf
- The most recent version of the Detailed Drawings can be found at the following link: https://www.mdt.mt.gov/business/contracting/detailed_drawings.shtml
- The most recent version of the Materials Manual can be found at the following link: https://www.mdt.mt.gov/other/webdata/external/materials/materials_manual/MDT-MATERIALS-MANUAL-120822-LETTING.pdf

The latest version of the Standard and Supplemental Specifications, Biannual updates, and revision summaries can be found at the following website: https://www.mdt.mt.gov/business/contracting/standard_specs.shtml

The Question-and-Answer Forum opens at 5:00 p.m. on the bid letting advertisement date and closes at 10:00 a.m. on the Monday before the bid letting. If Monday is a state holiday, the forum will close on Friday before the bid letting at 3:00 p.m. Questions raised by potential bidders on this project and answers and other information posted by the Department on the "Question and Answer Forum" can be found at the website https://www.mdt.mt.gov/business/contracting/qacurrent.shtml up to 5 p.m. on the day before the bid letting.

The U.S. Department of Transportation (DOT) operates a toll-free number at 1-800-424-9071, 24 hours a day - 7 days a week. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use this number to report such activities. All information will be treated confidentially, and callers may remain anonymous.

The Department attempts to provide reasonable accommodations for any known disability that may interfere with a person participating in any service, program, or activity of the Department. Alternate accessible formats of this document will be provided upon request. If reasonable accommodation is needed to participate in Department bid lettings, call the Civil Rights Bureau at 444-6331 or TTY 406-444-7696 [TTY 1-800-335-7592 (toll free)].

1. PROJECT DESCRIPTION [102]

Bridge removal and replacement and reconstruction of roadway and approaches on Highway 287 in Madison County, Montana. Work includes grading, gravel, plant mix surfacing, signing and pavement markings, guardrail, stream grading, and remove and replace structure. The project is located northwest of Virginia City on Highway 287 from RP 17.481 to RP 17.970.

2. CONTRACT TIME [108] (REVISED 1-21-16)

The work begins on the effective date stated in the Notice to Proceed (NTP) and is to be completed in 160 Working Days. The NTP will be issued with an effective date of February 6, 2023.

3. CONTRACT DOCUMENTS [102] (REVISED 6-9-22)

The following documents are now available within the Contractors Reference Material on the Department's Contracting and Bidding webpage https://www.mdt.mt.gov/business/contracting/ :

1) Table of Contractor's Submittals. (Revised 6-9-22)
2) Traffic Control Rate Schedule (Revised 6-9-22)
3) Erosion Control Rates

4. DISADVANTAGED BUSINESS ENTERPRISES (DBE) REQUIREMENTS [102] (REVISED 1-18-18)

The DBE goal for this contract is 0.0%. Use the AASHTOWare Project Bids™ Electronic Bid System (EBS) to print the DBE submittal and timing requirements. If the contract does not have a project-specific goal, the field will display in the AASHTOWare Project Bids™ bid file as a blank field.

List the DBE commitments in the EBS file. An on-line DBE Directory is available at: https://app.mdt.mt.gov/dbe/dbe/search.

If the DBE goal cannot be met, show a good faith effort per the Good Faith Effort Criteria and supporting forms, available at: http://www.mdt.mt.gov/publications/forms.shtml. Submit the Good Faith Effort documentation within 48 hours of the bid opening.

5. DBE QUOTES [102] (REVISED 3-10-16)

The Department has a quick and easy way for you to request quotes from Montana DBE-certified companies. The information goes to the DBE companies that same day. The on-line form is located at web site: https://app.mdt.mt.gov/dbeqt/.

Call the Department DBE Supportive Services, 1-800-883-5811, for further assistance. Using this online request form will be considered for good faith efforts, but it does not constitute meeting all requirements of good faith efforts.

6. DBE USAGE [102] (REVISED 2-13-20 M)

Contract specific goals are not placed on contracts; however, the Department has an overall 6.5% DBE goal it must achieve. To assist contractors in determining their DBE commitment level, the Department has reviewed the estimates for this contract, and has established an aspirational goal of 5.5% DBE usage. Although not a contract requirement, the Department believes that the aspirational goal can realistically be achieved through race neutral measures based on current availability of DBEs and standard competitive procurement processes. While the utilization is not mandatory to be awarded the project, continuing utilization of DBE firms on contracts supports the success of Montana's DBE Program.

Any project listing a 0% DBE aspirational goal does not mean that a DBE may not be used on that project. A 0% DBE aspirational goal may have been established due to any of the following reasons:

- Limited identified subcontracting opportunities;
- Minimal contract days; and/or,
- Small contract dollar amount.

Contractors are encouraged to identify any opportunities to subcontract to DBEs.

The Department's DBE directory may be found at the following website: https://app.mdt.mt.gov/dbe/dbe/search.

7. LABOR REQUIREMENTS [102] (REVISED 9-5-19)

Pay the minimum wage rates contained elsewhere in the bid package. Comply with the required contract provisions contained in the form FHWA 1273 included with this contract. To obtain more information, contact the Department's Construction Engineering Services Bureau at 2701 Prospect, Helena, MT (406)475-2258, (800)335-7592 (TTY) or (406)444-7297 (Fax). The local employment service office, designated by the Workforce Service Division, Department of Labor & Industry, for this project is Dillon or Bozeman.

Executive Orders 13658 and 13706 do not apply to this contract.

8. CERTIFIED PAYROLL COMPLIANCE ELECTRONIC PAYROLL SUBMISSION [102] (REVISED 3-12-20)

The Contractor and all subcontractors must use AASHTOWare Project Civil Rights & Labor™ (CRL) to submit Certified Payrolls (CPRs). Ensure that all subcontractors have submitted their Vendor Access Form which can be found on the following page: https://www.mdt.mt.gov/business/contracting/prevailing-wage.shtml to the Department and have received their login IDs prior to work.

Request the contract number and project ID(s) from the Project Manager. Provide the information to all subcontractors subject to the FHWA 1273 requirements. This information is also available using the Search Awarded Contracts located at: https://app.mdt.mt.gov/project-search/project/search.

Provide assistance and ensure all subcontractors submit CPRs electronically into CRL within the required timeframe.

9. BID WITHDRAWAL [102] (ADDED 6-9-22)

Rescind the first paragraph of Subsection 102.11 and replace with the following:

Submit withdrawal requests to ECCB before the time set for opening bid proposals. A bidder may withdraw any Proposal using EBS, in person, through an authorized agent, or by submitting the bid withdrawal form to ECCB via email (mdtcntplns@mt.gov) before any bid Proposal on that project is opened.

10. SOIL BORING INFORMATION [102] (REVISED 1-16-14)

The Department routinely conducts subsurface investigations and laboratory testing to collect soil, rock and groundwater information (“geotechnical information”) within the anticipated limits of upcoming projects and maintains a comprehensive set of this information in its geotechnical file. For this contract, geotechnical information has been collected by the Department and logs of boring summarizing this information have been included in the Special Provisions and Plans. “Logs of Borings” in the Special Provisions and Plans are based on an interpretation of the field investigation and laboratory testing data, and do not include all the geotechnical information that may be available. The geotechnical information contained in the “Logs of Borings” has been edited or abridged and may not reveal all the geotechnical information which might be useful or of interest to the bidder.

The comprehensive set of geotechnical information is considered too voluminous to include in the bidding package. The geotechnical information that the Department has is available for review or copying upon request. Rock core samples are regularly retained as well. All bidders are expected to fully review all of the geotechnical information prior to submitting their bid. The prime bidder is responsible for ensuring that a firm submitting a subcontractor quote for the prime's use is aware of all available geotechnical information.

Submission of a bid without fully reviewing the Department's comprehensive set of geotechnical information or accepting a quote from a subcontractor without verifying that the subcontractor reviewed all available geotechnical information is a business decision by the bidder. Failing to fully review all available geotechnical information waives the contractor from making any claim, whether termed "superior knowledge", "justifiable reliance", "differing site condition", or otherwise, against the Department for any information that may be included in the comprehensive geotechnical information file and not shown, or not fully shown, in the “Logs of Borings” contained in the contract documents.

Soil, rock, and groundwater conditions shown on the logs of boring apply only at the specific boring locations and at the time the borings were made. They are not warranted to be representative of subsurface conditions at other locations or times. Groundwater conditions commonly vary seasonally and from that encountered during drilling. Determination of a material's classification is based in part on judgment and opinion. The Department assumes no responsibility for any variation or misinterpretation of the classification of materials.

Utilize the Question and Answer forum to request additional geotechnical information or to submit questions regarding the geotechnical information. To review all available geotechnical information, submit a request in writing to the Department's Geotechnical Section to schedule a time to review the available geotechnical information. Requests for access should be made a minimum of 10 business days prior to the bid opening.

11. BIDDER'S PROPOSED AGGREGATE SOURCE(S) [103] (REVISED 4-28-22)

No later than 7 calendar days after the date of bid-opening (the date of bid opening to count as the first full day), submit to ECCB form MDT-CON-106-02-3 in accordance with Subsection 103.11.

12. PARTNERING- LEVEL II FACILITATION [105] (ADDED 2-25-21)

An internal partnering meeting will be facilitated between the Project Manager and the Contractor prior to the Notice to Proceed date.

Implement partnering in accordance with the Montana Partnering Field Guide found at the following link: https://www.mdt.mt.gov/publications/manuals.shtml#con

Make a good-faith effort to settle any unresolved discrepancies by utilizing the Partnering Escalation/Issue Resolution Ladder identified in the Partnering Field Guide prior to submitting a notice of claim.

13. STEEL PRICE ADJUSTMENT [106] (REVISED 4-28-22)

A. General. The Contractor may elect to participate in a Steel Price Adjustment to payments for selected bid items made primarily of steel. Payment adjustments will only be made for fluctuations in the cost of the steel material. No adjustment will be made for changes in the cost of manufacturing, fabrication, shipping, storage, for any products purchased from the mill prior to the letting date, or for steel that is not permanently incorporated into the work.

The price adjustment will be based on the base price per pound of steel and changes to the steel price index between the bid letting date and the steel purchase date. Payment adjustments may be positive or negative.

Steel Price Index: The Department will use the Bureau of Labor and Statistics Producer Price Index (BLS PPI) "Steel Mill Products" Series ID WPU1017 not seasonally adjusted. The index used will be the final version of the index, revised 4 months after the original publication, including any corrections to the index.

The base price per pound of steel for this contract is: $0.75.

B. Applicable Bid Items. Notify the Project Manager in writing by the Notice to Proceed date or at the pre-construction conference, whichever comes first, of any intent to participate in the steel price adjustment. Select the bid items for participation at the time of notification to the Project Manager. No changes will be allowed after submission.

Nuts, bolts, rebar chairs, connecting bands, and other miscellaneous hardware items will not be included in the price adjustment. High strength bridge bolt assemblies may be included in the price adjustment.

C. Steel Price Index. Furnish the following documentation for all steel bid items selected for steel price adjustment regardless of whether the index increased or decreased:

1) Paid invoice or other proof of purchase showing the date the steel was purchased and the weight of the steel.

2) An affidavit signed by the Contractor stating that the information provided is true and accurate.

3) Submit all documentation prior to incorporating the steel into the work. This provision in no way modifies or cancels the requirements of Subsection 106.09.

D. Steel Price Adjustment. The Project Manager will calculate the adjustments. Adjustments may be positive, negative, or non-existent depending on the difference between

the Base Index (IB) and Current Index (IC). No price adjustment will be made unless the IC is 10% higher or lower than the IB.

For Increases:

Adjustment Factor (AF) = (IC/IB-1.10), rounded to the nearest 0.01
If AF is equal to or less than 0, no adjustment.
If AF is greater than 0, continue
Payment Adjustment = AF x weight x base price

For Decreases:

Adjustment Factor (AF) = (IC/IB-0.90), rounded to the nearest 0.01
If AF is equal to or greater than 0, no adjustment.
If AF is less than 0, continue
Payment Adjustment= AF x weight x base price

Where:
IB = BLS PPI for month contract was let
IC = BLS PPI for month material was purchased from the mill (invoice date)
Weight = weight of steel in pounds

14. BUILD AMERICA, BUY AMERICA (BABA) [106] (ADDED 12-08-22)

Furnish construction materials manufactured in the United States. Manufacturing processes for the construction material must occur in the United States. Manufacturing processes are defined as the final manufacturing process and the process immediately preceding the final manufacturing process. Construction materials include articles, materials, or supplies that are or consist primarily of:

- Non-ferrous metals.
- Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables).
- Glass.
- Lumber, and
- Drywall.

Construction materials exclude cement and cementitious materials, aggregates including stone, sand, or gravel, or aggregate binding agents (e.g., asphalt binder) or additives (e.g., polymer modifiers and admixtures).

Treat items that consist of two or more construction materials that have been combined through a manufacturing process, and items that include at least one construction material combined with a material that is not listed through a manufacturing process, as manufactured products. Manufactured products that do not contain steel or iron are exempt until further notice.

Buy America preference applies to articles, materials, and supplies that are consumed in, incorporated into, or affixed to a project. It does not apply to tools, equipment, and supplies brought to the construction site and removed at or before the completion of the project (e.g., temporary aluminum scaffolding). Buy America preference does not apply to equipment and furnishings that are used at or within the finished infrastructure project but are not permanently affixed to the structure (e.g., movable chairs, desks, or computer equipment used at or within the project but are not integral or permanently affixed to a structure).

Submit Form MDT-MAT-407 “Manufacturer’s Certificate of Compliance” for every material identified as a construction material in the Department’s Materials Manual Section MT 601 furnished to the project. Do not incorporate construction materials into the project until all required documentation is submitted to the Department. Ensure that suppliers and

manufacturers understand the BABA and contract requirements to supply the required documentation.

The Department will not accept items installed until all supporting documentation has been reviewed and is found to be in accordance with the contract requirements. Insufficient or unavailable documentation or documentation showing products to contain construction materials of foreign origin are grounds for removal and replacement at the contractor's expense.

The Department has designated which materials are considered "construction materials" and will be required to meet the new BABA regulations by their respective 9-digit material codes in section MT 601 of the Montana Materials Manual. However, the Department recognizes there will be situations where a product or material may not fit the designation indicated in section MT 601. In these cases, submit documentation demonstrating or justifying the supplier or manufacturer's position their specific item has been misclassified to the Project Manager at least 10 business days in advance of installation. The Department, in conjunction with FHWA, will review the submitted documentation and make a determination as to how that specific product or material will be classified. These determinations will be final and will require the appropriate necessary documentation as defined above.

15. STATUS OF UTILITIES [108] (ADDED 1-1-03)

Utility relocation work is not complete and will not be complete as of the letting date and contract award date. Project work must be coordinated with the utility company relocation activities until the utility relocation work is complete. Under no circumstances will a delay in relocating utility facilities be considered as justification for additional compensation.

Should unforeseen conditions arise which substantially delay the utility relocation work, and the delay results directly in a delay to the project work, make a written request to the department for a time extension, see Subsection 108.07.4.

Company	Facility	Contact	Phone #
NorthWestern Energy	Overhead electrical	John Helfrich John.Helfrich@northwestern.com	406-498-6001 Cell
3 Rivers Communications	Underground communication lines	Darrin Reed darrin.reed@3rivers.coop	406-590-2061 Cell

16. SUBCONTRACTING CONSULTANTS [108] (REVISED 2-27-14 M)

The following consultants performed work on the project.

- Great West Engineering, Inc.
- SK Geotechnical
- Sanderson Stewart

17. NOTICE TO BIDDERS [108] (ADDED 11-21-08)

This project is funded in whole or in part by funds received from the Federal Highway Administration (FHWA), and its construction is wholly contingent on the state's continued receipt of those federal funds. If the federal funds are reduced or not received, the Department may choose to terminate the contract for convenience under the provisions of Subsection 108.10. Any bidder on this project, by submitting its bid, understands and accepts the possibility of the contract being terminated in the event federal funds are reduced or not available and by submitting a bid, each bidder waives any claims for costs or damages other than as specifically allowed by Subsection 108.10.2. In particular, bidders understand and accept that no payment will be allowed for any claimed anticipated profit for work not performed.

18. STREAM RESTORATION SPECIALIST – MDT (SRS) [610]

A. Description. The Montana Department of Transportation (MDT) has contracted with a prequalified Stream Restoration Specialist (SRS) to provide construction oversight and guidance to the Contractor during the construction phase of the project. The SRS will ensure that construction of the stream channel and associated features is performed in accordance with contract design specifications.

Specific to this contract, this work includes but is not limited to:

1) Channel excavation and construction through the new bridge opening
2) Riprap and bioengineered bank installation within specified limits
3) Willow cutting, collection, inspection, and installation
4) Riprap revegetation and revegetation of floodplain benches
5) Transition and connection to new channel constructed by others up and downstream of the new bridge opening
6) Coordination between MDT Contractor and RVCD Contractor through the MDT Project Manager regarding the work identified within this special provision.

B. Requirements. The Contractor is required to perform all work identified in A. under the oversight and guidance of the SRS. The SRS is to familiarize themselves with the general morphological characteristics of the stream in the project area and the planned channel design prior to construction.

The SRS will report to the Project Manager regarding all stream construction activities and obtain approval from the Project Manager prior to executing any field changes to the plans or specifications. The Project Manager will coordinate any proposed changes with the MDT District Biologist, as needed.

1) The SRS is required to attend the pre-construction, on-site pre-work, and post-construction meetings.
2) The Contractor is required to coordinate with the SRS for scheduling of stream construction/restoration related activities, meetings, and all associated activities that require SRS oversight. The Contractor is required to notify the SRS no less than 5 working days in advance of all changes in schedule related to stream construction activities.
3) The SRS will review and approve or modify the staking of stream channel(s) and associated features prior to initiation of and/or during performance of the work.
4) The SRS and Project Manager will notify the MDT District Biologist no less than 5 working days in advance of the “rough-in” excavation of the new stream channel.
5) The SRS is responsible for making minor stream alignment and/or staking revisions, if necessary, and field fitting (making minor adjustments to best fit) stream channel features. Field changes to the stream channel design or specifications require approval from the Project Manager in coordination with the District Biologist prior to initiating and/or during performance of the work.
6) The SRS and Project Manager will contact the MDT District Biologist to schedule the prework meeting described elsewhere in this proposal no less than ten working days prior to beginning the construction of the bioengineered banks and associated features to be constructed under oversight and guidance of the SRS.
7) The SRS and Project Manager will coordinate with the MDT District Biologist prior to implementing any field changes to the design that result in an increase or reduction in stream length, substitution of materials, changes in planting or revegetation schemes, removal of items specified in the plans or specifications, or any other major alteration of the contract design specifications and plans related to construction of the stream channel(s) and associated features to be constructed under oversight and guidance of the SRS. Permit modifications may be required prior to continuance of the work.
8) The Contractor is required to report any issues or problems related to the construction of the stream channel(s) and associated features to the SRS and the Project

Manager. The Project Manager will coordinate with the SRS and MDT District Biologist to determine an acceptable solution as needed.

9) All contacts and communications with resources agencies must go through MDT Environmental.

C. Measurement and Payment. Stream Restoration Specialist is not measured for payment.

19. MOISTURE SENSITIVE SOILS [203] (REVISED 9-11-14)

A. Description. Subsurface investigation for this project indicates that subgrade and/or foundation soils located within the project limits are sensitive to changes in moisture content, and may cause construction difficulties. Use construction methods and equipment appropriate for moisture-sensitive soils.

B. Construction. Unless otherwise specified in the contract or by the Project Manager, limit the length of subgrade exposed to precipitation events to an amount that can be adequately sealed by the contractor within 30 minutes of the start of a precipitation event.

Many possibilities are available to facilitate construction and to achieve proper compaction of the subgrade or foundation soils in the project limits. The Department does not direct the use of any of them. However, in preparing bids, identify measures to address the identified conditions. Some possibilities to consider are:

1) Sealing the surface of all exposed subgrade/foundation by rolling with a smooth drum roller whenever work at a particular location is interrupted for 6 or more hours and at the end of each work day;

2) Grading and sloping the surface of all exposed subgrade/foundation to facilitate unimpeded surface drainage away from the work area; and/or,

3) Allowing soils to adequately dry (including after precipitation events) before attempting any type of construction work on the subgrade/foundation soils.

C. Method of Measurement and Basis of Payment. Include all costs for the method(s) chosen to effectively address construction on moisture sensitive soils in the bid item for unclassified excavation/borrow. No additional compensation will be allowed or given for claimed increased costs to address that portion of the work addressed by this provision.

20. ENVIRONMENTAL SPECIFICATIONS [208] (ADDED 9-9-21M)

The Contractor is required to review and meet the specifications of the following subsections:

Migratory Bird Treaty Act Compliance – Vegetation Removal	Subsection 208.03.4A(1)
Migratory Bird Treaty Act Compliance – Structures	Subsection 208.03.4A(2)
Work in Bear Habitat	Subsection 208.03.4E
AIS Watercraft and Equipment Inspection	Subsection 208.03.2D

21. STORM WATER PERMITTING REQUIREMENTS UNDER THE MONTANA POLLUTANT DISCHARGE ELIMINATION SYSTEM (MPDES) [208] (REV 3-16-17)

A. Description. The Montana Department of Environmental Quality (DEQ) regulates storm water discharges under the MPDES program. If the bid package contains blank erosion control plans, a construction storm water discharge permit authorization will be required. If not, a storm water discharge permit authorization may be required for this project depending on Contractor's operations. Sum the disturbance area (as defined by DEQ) identified in the contract with the area of disturbance caused by contractor operations to determine if the permit acreage threshold is exceeded. Contractor operations can include, but are not limited to, the following support activities: staging areas, access roads, material storage areas, temporary concrete or asphalt batch plants, borrow areas, areas used for fill placement, etc. If the summed

disturbance area is one acre or more, use the DEQ authorization to discharge under the MPDES General Permit for Storm Water Discharges Associated with Construction Activity for this project. In order to facilitate permit transfer, separate NOI packages are required for areas within the right-of-way and areas outside of the right-of-way. A Notice of Intent (NOI) package includes a Notice of Intent, with a topographic map, a Storm Water Pollution Prevention Plan (SWPPP), the erosion control plans, sage grouse consultation letter, if applicable, and supporting documentation.

Blank Erosion Control Plans, and a topographic map, are provided with the plans if the plans include greater than 1 acre of disturbance. Complete the erosion control plans as required by the general permit. Complete the SWPPP using DEQ's most current SWPPP Form.

B. Materials. Follow the requirements described in the Department's *Erosion and Sediment Control Best Management Practices Manual (December 2016).* Rescind Section 208 detailed drawings. Submit to the Project Manager for review and acceptance BMPs proposed for use that are not included in the Manual.

C. Construction Requirements.

1) MPDES Permit Required.

a) Submit one NOI package and the associated fees to DEQ for ground disturbance areas shown in the plans or within the right-of-way. For ground disturbance areas shown in the plans and any other areas within the right-of-way where Contractor activities causing ground disturbance are planned, the Contractor is the sole permittee until construction is complete and the General Permit is transferred to the Department or another entity.

The Department is not responsible for delays caused by incomplete or inaccurate submittals by the Contractor.

Comply with the requirements of the General Permit for Storm Water Discharges Associated with Construction Activity and implement the SWPPP. Provide two copies of the NOI Package submitted to DEQ and confirmation for receipt of a complete NOI Package from DEQ to the Project Manager prior to conducting any ground disturbance activities.

Do not begin construction activities until the required copy of the NOI Package submitted to DEQ and confirmation for receipt of a complete NOI Package from DEQ is received by the Project Manager.

b) Submit a separate NOI package and the associated fees to DEQ for ground disturbance and support activity areas outside the right-of-way and not shown in the plans. Contractor furnished material sources, staging areas, plant sites, or any other Contractor caused ground disturbance outside the right-of-way and not shown in the plans, are the Contractor's responsibility and must be submitted under a separate NOI package from the ground disturbance within the right-of-way. For all support activities outside the right-of-way which are not part of a larger commercial operation serving multiple unrelated construction activities, and will not continue operation beyond the completion of the contracted road construction activity, a notice of intent package must be submitted to DEQ to obtain an authorization under the storm water construction permit. Sand and gravel borrow area operations, gravel pits, and/or concrete batch plants that will continue operation beyond the completion of the contracted road project, are part of a larger commercial operation, or serving multiple unrelated construction activities must obtain permit coverage under the Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activity (MSGP) regardless of acreage size of the activity if the activity does not already have MSGP authorization. The Contractor is the sole permittee until stabilization is complete and the General Permit is terminated or transferred to another entity. The Department is not responsible for delays caused by incomplete or inaccurate submittals to DEQ by the Contractor.

Provide a copy of the NOI Package submitted to DEQ and confirmation for receipt of a complete NOI Package from DEQ to the Project Manager prior to conducting any ground disturbance activities.

Be responsible for all temporary erosion, sediment, and pollution prevention controls for Contractor furnished material sources, staging areas, plant sites, or any other Contractor caused ground disturbance outside the right-of-way and not shown in the plans.

c) Complete and document all inspections in accordance with the requirements of the General Permit for Storm Water Discharges Associated with Construction Activity. Use DEQ's most current self-inspection form available online at: http://deq.mt.gov/Water/WPB/mpdes/stormwaterconstruction. Provide a copy of all inspection reports to the Project Manager.

Report potential noncompliance in accordance with applicable regulations, guidance, and permit conditions. Submit to the Project Manager within seven days of sending or receiving all correspondence to or from regulatory agencies regarding potential noncompliance or violations.

The temporary erosion and sediment control measures and devices to prevent pollution and control sediment transport and soil erosion will be inspected as part of the final inspection to ensure they are maintained and functioning properly. Do not transfer or terminate the General Storm Water Permit coverage until the BMPs are inspected and accepted and all records required under the permit, including inspection and monitoring reports, are furnished to the Project Manager. The Department may require that certain Best Management Practices (BMPs) be replaced by another type of BMP as a condition of permit transfer.

Upon approval of site conditions, measures, devices and all pertinent records, submit a signed copy of the Permit Transfer Notification Form provided by the Department. When submitting the General Storm Water Permit transfer package/application to the Department, include a check for the permit transfer fee. Make the check for the amount of the fee payable to the DEQ. The Department is not liable for the completeness or accuracy of Contractor records completed prior to the permit transfer. Upon receipt of the signed form, the Department will obtain signature of the new permit owner and submit to DEQ. Ensure permit conditions and responsibilities are met until confirmation of the transfer is received from DEQ. Defend and hold MDT harmless from any violations, claims, enforcement actions, penalties or fines issued for Contractor activities or recordkeeping that occurred prior to the transfer of the General Permit for Storm Water Discharges Associated with Construction Activity authorization.

If the Department concurs that final stabilization has been met during the final walk-through, the Contractor may submit a Notice of Termination form to DEQ. Pay the annual fee invoice due at the time of termination. Submit the annual fee invoice to the Project Manager for reimbursement.

2) MPDES Permit not Required.

The BMP-Administration item is included in contracts that may not meet either criteria for a MPDES permit but include ground disturbing activities. Complete BMP inspections and install BMPs, if necessary, in accordance with Section 208, if no storm water permit is required. Utilize form MDT-ENV-014, Water Pollution Control Inspection Report. A certified SWPPP Administrator is not required to conduct the inspections if no permit is required.

D. Method of Measurement. DEQ MPDES fees and monitoring costs associated with obtaining and maintaining the General Permit for Storm Water Discharges Associated with Construction Activity for ground disturbance areas both within and outside the right-of-way are not measured separately for payment.

If no permit is necessary, include the cost of all erosion control, devices, and inspections in the BMP-Administration bid item.

E. Basis of Payment. No additional payment will be made for the DEQ MPDES fees and monitoring costs associated with the General Permit for Storm Water Discharges Associated with Construction Activity. Include these costs in the Temporary Erosion Control-Lump Sum bid item.

For project including the BMP-Administration item, include the cost of all erosion control, devices, and inspections in the BMP-Administration bid item. Partial payment for the BMP-

Administration will be monthly based on the lump sum contract price in accordance with Table 208-1 in Subsection 208.05.1.

Payment for BMPs required by an event or extra work, and approved by the Project Manager, will be measured and paid for in accordance with the Erosion Control Rate Schedule contained in the contract at a unit price of $1.00 per unit.

22. STREAM PROTECTION ACT 124 [208]

A. Description. The proposed project has been authorized by Preconstruction Stream Protection Act (SPA) 124 No.: MDT-R3-34-2022, by the Montana Department of Fish, Wildlife, and Parks (FWP); provided the General and Special Conditions listed below are followed. This Preconstruction SPA 124 authorizes the permanent features at the following locations:

Station	Waterbody
133+45	Granite Creek – Abandoned Channel New Culvert
135+40	Granite Creek - New Channel Connection New Bridge

B. General Conditions

1) Meet the specifications listed in Subsection 208.03.3G.

2) Obtain a temporary facility SPA 124 Permit/Authorization in accordance with Subsection 208.03.2B.

C. Special Conditions

1) Notify the Project Manager a minimum of 10 working days prior to starting work authorized under this permit. The Project Manager will notify the District Biologist a minimum of 5 working days prior to starting this work.

2) Obtain a Short-Term Water Quality Standard for Turbidity (318 Authorization) from DEQ in accordance with Subsection 208.03.3D.

3) Follow the stream construction sequencing with RVCD outlined in the contract [and complete work] under the supervision of the Stream Restoration Specialist [as specified in the Stream Restoration Specialist – MDT special provision].

Copies of the Preconstruction SPA 124 Authorization are available upon request from Environmental Services.

Contact the Project Manager for coordination with the District Biologist on questions regarding this authorization.

23. CLEAN WATER ACT SECTION 404 PERMIT AND SECTION 401 CERTIFICATION

A. Description. This provision describes the project work that has been authorized under Sections 404 and 401 of the Clean Water Act (CWA) and the associated conditions that must be adhered to for compliance with CWA requirements.

B. Section 404 CWA Nationwide Permit 23 Description. The permanent features of this project are authorized under a US Army Corps of Engineers Nationwide Permit 23 – Approved Categorical Exclusions, (Army Corps File Number NWO-2022-00956-MT).

1) The permit for this project authorizes the following project work to be performed within waters of the US.

a) Impact 141 linear feet of stream bank through the abandonment of the current stream channel alignment and the placement of a 90 foot-long by 24-inch diameter culvert as a new overflow structure, with 486 cubic yards of fill and 132 square yards of geotextile fabric. Located at Latitude 45.324779°, Longitude -112.001643°, on Granite Creek, within Section 8, Township 6 S, Range 3 W

b) Permanently impact a total of 2.352-acres of wetland to realign the stream channel approximately 200 linear feet east of the existing bridge structure. Prior to realignment, a new 70-foot-long by 40-foot-wide cast-in place concrete deck with driven piles and stub abutment structure will be placed. Fill material will include riprap, backfill materials, geotextile fabric, and native materials.

2) This authorization is valid until March 14, 2026

3) Obtain the Nationwide Permit 23 Fact Sheet that fully describes the Nationwide Permit 23 and lists the General Conditions that must be adhered to for this authorization to remain valid. Adhere to the General Conditions.

C. Section 404 CWA Nationwide Permit 33 Description. Obtain authorization for the temporary features of this project (e.g. work bridges, work pads, cofferdams, diversions, etc.) under US Army Corps of Engineers Nationwide Permit 33 – Temporary Construction, Access, and Dewatering.

1) Acquire an additional Section 404 Permit and 401 Certification authorization for temporary discharges that are:

a) Located within 100 feet of the water source in natural spring areas;

b) Within the boundaries of any Tribal Reservation or Tribal trust lands;

c) Within the following waterways and their impoundments: Kootenai River, Missouri River, Yellowstone River, Bitterroot River, Clark Fork River (tributary to the Columbia River), Flathead River, Flathead Lake, and Milk River; or,

d) Within Special River Management Zone of the Upper Yellowstone River.

Prepare and submit a joint application in accordance with Section 208.03.3. MDT is not responsible for delays caused by incomplete or inaccurate submittals by the Contractor.

2) For all other temporary discharges, submit a written description to the Project Manager detailing the temporary facilities planned for the project, along with the associated restoration plan. Allow 5 working days for the Project Manager to review the plan and confirm CWA 404 pre-construction notification is not required. For temporary discharges authorized under Nationwide Permit 33 without pre-construction notification, the authorization is valid until March 14, 2026.

3) Obtain the Nationwide Permit 33 Fact Sheet that fully describes the Nationwide Permit 33 and lists the General Conditions that must be adhered to for this authorization to remain valid. Adhere to the General Conditions.

D. CWA Section 404 Regional Conditions. Obtain the 2021 Nationwide Permits Regional Conditions, Omaha District, State of Montana, Effective February 25, 2022, that also apply to this project and must be adhered to for these authorizations to remain valid. Adhere to the Regional Conditions, including but not limited to the following:

1) Temporary fills in wetlands must be placed on a horizontal marker layer, such as fabric or certified weed-free straw, to delineate the pre-project ground elevation and facilitate complete fill removal and site restoration.

E. All erosion control blanket or fabric used in or adjacent to waters of the United States must be comprised of degradable material to ensure decomposition. Do not use material that includes stabilized netting or stabilized open mesh, as these products take a long time to degrade, and they can trap small animals, birds, amphibians and fish. This prohibition also applies to mesh materials used for wattles, rolled materials, and bank wraps. Erosion control blanket or fabrics that break down within 24 months are acceptable. Non- degradable blankets or fabric may be allowed on a case-specific basis if it will be buried beneath riprap or structures and it is not likely to be exposed. Non-degradable blanket or fabric that becomes exposed within waters of the United States must be removed. CWA Section 401 Water Quality Certification is granted for Nationwide Permit 23 by the Montana Department of Environmental Quality (DEQ), provided that certain general and special conditions are met.

1) Obtain the water quality certification requirements issued by DEQ on December 14, 2020. Adhere to those general and special conditions.

2) Notification in accordance with General Condition E.1 has been fulfilled by MDT.

F. Copies of the 2021 Nationwide Permit Fact Sheets for Nationwide Permits 23 and 33, the 2021 Nationwide Permit Regional Conditions for the State of Montana, and DEQ's 401 Water Quality Certification Requirements for the 2021 Nationwide Permits are available upon request from Environmental Services or on the web at http://www.mdt.mt.gov/business/contracting/environmental/cwa.shtml .

Coordinate with the engineering project manager if you have questions regarding this authorization. Proposed changes to the permanent structures should be directed to the project manager for coordination with the District Project Development Engineer in the Environmental Services Bureau. Temporary facility permitting and/or general permit questions should be directed to the project manager for coordination with the District Environmental Engineering Specialist.

24. GREATER SAGE GROUSE CONSERVATION

A. Description. Greater Sage-Grouse is a species of concern under state management actions: Executive Order (E.O.) No.12-2015 and Montana Greater Sage-Grouse Stewardship Act. These management actions established procedures and stipulations for activities in designated general and core greater sage-grouse habitat and connectivity areas.

This project occurs entirely within designated general habitat for the greater sage-grouse. The project limits do not occur within 2.0-miles of an active lek.

B. Requirements.

1) Weed management is required within designated habitat for greater sage-grouse. Reclamation of disturbed areas must include control of noxious weeds and invasive plant species, including cheatgrass (Bromus tectorum) and Japanese brome (Bromus japonicus).

2) Coordinate with the MSGHCP (https://sagegrouse.mt.gov/) on all contractor responsible activities located outside MDT Right-of-Way in designated sage-grouse habitats which require the contractor to obtain a state permit or authorization prior to conducting work. MDT has completed consultation with the MSGHCP only for proposed work located within MDT Right-of-Way. A copy of the consultation letter from the MSGHCP is available upon request from Environmental Services.

3) Seed any disturbed areas with desirable plant species as soon as practicable after construction to reduce the spread and establishment of noxious weeds and to re-establish permanent vegetation.

C. Measurement and Basis for Payment. Work described in this provision is not measured for payment. Consider all costs, including any mitigation required by the MSGHCP, associated with this provision incidental to performance of the work. Include the cost in the cost of other items.

25. COORDINATION WITH ADJACENT STREAM RESTORATION PROJECT AND WORK SEQUENCE

The Ruby Valley Conservation District (RVCD) is designing and constructing an adjacent stream restoration and realignment project upstream and downstream of the proposed bridge location. RVCD's stream restoration contractor will initiate the stream restoration project in advance of MDT's road and bridge project. Coordinate closely with the RVCD stream restoration contractor on the sequence of construction and connecting the stream restoration work segments together. The following is a tentative work sequence and may change based on the Contractor's own means and methods and coordination with the RVCD stream restoration contractor. The tasks are titled either MDT or RVCD to provide a general indication of the work responsibility. RVCD Contacts; Audra Bell, Stewardship Director (RVCD): 406-842-5741, Jeremiah Theys (Great West Engineering): 406-495-6193.

A. RVCD: Divert creek into relic channel with Granite Creek flowing beneath the existing bridge.

1) RVCD's stream restoration contractor will divert Granite Creek into a historic channel. The point of diversion is upstream of the stream reconstruction area and approximately 500 feet upstream of the new bridge crossing location. Granite Creek will still flow under the existing bridge at this stage.

B. RVCD: At the option of the RVCD contractor, they could rough-in the new channel downstream of the new bridge.

C. MDT: Install temporary 66" diameter culvert beneath the new road location. The temporary culvert is designed to convey the 2-year flow of 124 cfs.

D. MDT: Construct new road and appurtenances.

1) When the Contractor initiates construction, Granite Creek will be flowing in the diverted channel and beneath the existing bridge, and traffic will be on the PTW. Determine a work sequence and traffic control plan to complete the work while accommodating public traffic.

E. MDT: Construct bridge abutments, place riprap and rough-in channel within the construction limits, Channel Station 10+55.83 to approximately 11+25 (except for the segment through the PTW).

F. MDT: Complete bridge and road approaches.

G. MDT: Shift public traffic onto the new road and bridge.

H. MDT: Remove existing bridge.

I. MDT: Extend 66" culvert through existing bridge opening.

J. MDT: Complete construction of Granite Creek Road approach.

K. MDT: Rough-in the remainder of the channel through the PTW, approximate Channel Station 11+25 to 11+70.63.

L. Perform the following activities after October 15, 2023.

1) MDT: Construct the bioengineered bank within the MDT construction limits (live fascines, soil lifts, coir logs and fabric, willow cuttings).

2) RVCD: Construct entire channel upstream and downstream of MDT's construction limits and also make the connection to the MDT channel.

a) Note that rough grading of the downstream channel may have already taken place.

3) RVCD: Turn creek into new channel and restore the point of diversion.

4) MDT : Cut back temporary culvert, as necessary, fill culvert with flowable fill (i.e., controlled low strength material), and bury the ends.

26. <u>BIOENGINEERED BANK</u>

A. Description. The purpose of this work is the incorporation of revegetation material into the banks of the new channel and constructing the new channel at the new bridge location from Channel Station 10+55.83 to 11+70.63. The work includes channel stabilization and revegetation elements to the dimensions and locations indicated in the plans.

B. Work on the bioengineered bank must take place after October 15, 2023. Refer to the Coordination with Adjacent Stream Restoration Project and Work Sequence Special Provision.

C. Materials. Furnish all materials and equipment required to perform this work. Furnish and install topsoil and native seed mix in accordance with the Riprap Revegetation Special Provision. Furnish and install live fascine, coir logs, wooden stakes, coir netting, high performance rolled erosion control blanket, topsoil, embankment, streambed material, and willow cuttings as indicated on the plans. Embankment and topsoil material utilized in the bank reconstruction to be approved by Project Manager.

1) Topsoil: Furnish topsoil meeting Subsection 713.05.

2) Fascine: Provide conifer and willow bundle fascines constructed from live cuttings as shown on the plans. Cuttings to be ½ to 2-inches in diameter and not less than 4-feet in length. Fascine to be tightly wrapped with untreated, biodegradable jute twine every 12" to 18". Breaking strength of twine to be minimum of 80 lbs.

a) Harvest live cuttings after October 15, 2023.

3) Coir Logs: Furnish coir logs of the following dimensions and technical specifications:

Length	Minimum 10 foot lengths
Diameter/ Unit Weight	12-inch / Min. 7 lbs per lineal foot
Density	Min 9 lbs per cubic foot
Wrapping Material	Encased in spun, multiple ply coir twine or yarn
Wrapping Strength	Min. 90 lbs
Wrapping Mesh Size	2 in x 2 in
Core Material	100% coir fibers, uniformly distributed

4) Coir Netting: Provide coir erosion control net consisting of a woven blanket made from bristle coir twines. Meet the following requirements:

Thickness	ASTM D1777	0.30 in
Tensile Strength (dry)	ASTM D4595	100 x 50 lb/in
Mass Per Unit Area	ASTM D3776	26 oz/sq yd
Open Area	Measured	40% (max)
Roll Width	NA	feet

5) High Performance Rolled Erosion Control Blanket: Furnish blanket meeting Subsection 713.12.

6) Willow Cuttings: Cuttings can be taken from the willows removed by this contract and may also be taken from other live willows within 20 miles of the project site. Coordinate with private landowners when applicable. Collect cuttings within the immediate vicinity of the project site to the extent practical. Collect and provide short term storage of the willow cuttings during the collection period in a manner that preserves their vigor and health.

a) Harvest cuttings after October 15, 2023.

b) Quantity of Cuttings: 2,003 (quantity accounts for a 15% mortality rate)

c) Length: 5 to 6 feet long

d) Cut surface diameter: 0.75 to 1.25 inch

e) Condition: Live, dormant, and freshly cut.

7) Embankment and Topsoil mixture: Mix topsoil and embankment at a 50/50 ratio for placement within the soil lifts as shown on the plans.

8) Streambed Material: Furnish streambed material meeting the following gradation.

Streambed Material Gradation	
Percent Passing	Inches or Sieve Size
100	14”
84	6”
50	2.5”
16	0.75”
10	No. 10

D. Construction Requirements. The contractor and Stream Restoration Specialist will attend a Bioengineering Bank Pre-Work meeting on site to discuss the proposed

bioengineering bank work with the District Biologist, Project Manager, and stream restoration contractor from the adjacent RVCD stream project. Notify the Project Manager and Stream Restoration Specialist to coordinate the scheduling of the pre-work meeting no less than 10 working days prior to construction of the bioengineered bank and associated features, as described in condition B.6) of the Stream Restoration Specialist - MDT special provision. Construction equipment, task sequencing, and construction methods will be discussed and finalized before work can commence. All work on the channel improvements must be performed under the direction of the Stream Restoration Specialist. The following tasks, not necessarily in order of work performance, are to be accomplished.

Work on the bioengineered bank must take place after October 15, 2023. Refer to the Coordination with Adjacent Stream Restoration Project and Work Sequence Special Provision.

1) Fascine: Ensure fascine is in contact with the coir netting of the encapsulated soil lift. Lap fascine segments a minimum of 18-inches. Lap the overlapping sections in the downstream direction to prevent the fascine from being dislodged by river flows. Stakes used to secure the fascine to be 30-inches long, untreated 2x4 lumber split diagonally.

2) Streambed material placement:

a) Place streambed simulation material on a prepared surface to form a well-graded, low permeability mass, similar in appearance and texture to the natural streambed.

b) Place stream simulation material in one or more layers with a layer depth not exceeding 6 inches depth. Place stream simulation material by methods that do not cause segregation or damage to the prepared surface. Place or rearrange individual rocks by mechanical methods to obtain a compact low permeability mass. Fill voids before placing the next lift and compact each layer until there is no visible evidence of further consolidation.

3) Coir fiber logs: Place coir fiber logs along the channel bank as shown on the plans.

4) Coir netting and high performance erosion control blanket: Wrap all encapsulated soil lifts with coir netting and high performance erosion control blanket as shown on the plans. Longitudinal joints in the coir netting are not permitted. The top lift is to be constructed of a continuous length of fabric. Stake the coir, erosion control blanket, and soil lift as shown on the plans.

5) Willow Cuttings: The Stream Restoration Specialist and Project Manager must inspect and approve all cuttings before installation. Cuttings that appear dead, damaged or visibly stressed will be rejected.

a) Place the cuttings as shown in the plan details to ensure the cuttings are infilled with 100% contact with suitable rooting material (topsoil). Saturate the cuttings/infill material before additional layers of rock infill are placed.

b) Install willow cuttings in bundles of two (2) to three (3), angled as shown in the details, to achieve approximately six (6) willow cuttings per linear foot per row.

6) Submit a plan to the Project Manager for securing the blanket and coir netting following the manufacturer’s recommendations. Wooden stakes 18-inch long – nominal 1-inch by 2-inch are to be used to secure the blanket and coir netting. It is important that all edges of the blanket/netting be secured.

7) Hand broadcast seed the native soils prior to placement of the erosion control blanket with the seed blend specified in the Riprap Revegetation Special Provision. Rake the seed into the soil to a ¼ to ½-inch depth after seeding.

8) The RVCD stream restoration contractor is responsible for connecting to the new stream channel upstream and downstream of MDT’s work limits.

E. Method of Measurement & Basis of Payment. Fascine, embankment, topsoil, coir netting, coir logs, wooden stakes, willow cuttings, seed, and erosion control blanket are measured and paid for as Bioengineered Bank lump sum. Payment is full compensation for all labor, tools, materials, equipment and other incidentals necessary to complete the work in accordance with the specifications and as directed by the Project Manager.

27. EMBANKMENT FOUNDATION TREATMENT

A. Description. This work consists of constructing an embankment foundation treatment consisting of Geotextile and Special Borrow and Special Embankment (Rock Fill) in accordance with the plans or as directed by the Project Manager.

B. Materials.

1) Provide Stabilization Geotextile meeting the requirements of Section 716.

2) Provide Special Borrow meeting the requirements of the Contract.

3) Provide Special Embankment (Rock Fill) meeting the requirements of the Special Embankment (Rock Fill) Special Provision.

C. Construction Requirements.

1) Embankment Above Groundwater.

a) In areas of embankment placement above groundwater, cut all vegetation greater than 1 inch in diameter flush with the ground and remove. Otherwise, do not disturb existing vegetation/vegetative root mat.

b) Place geotextile over the embankment subgrade area, as shown on the plans and cross sections, starting 3 feet up the embankment slope and terminating the geotextile 3 feet from the embankment toe, in conformance with Subsection 622.03. Overlap the adjoining edges of the geotextile a minimum of 3 feet with the edge of the upgrade sheet over the edge of the downgrade sheet.

c) Place the first 16 inches of Special Borrow over the geotextile without any specific compaction effort and with the least amount of equipment traffic possible.

d) Place the second lift of Special Borrow in a single lift of 8-inch loose thickness and compact to a minimum 90% of the maximum dry density, as determined by MT 210.

e) Place subsequent lifts of embankment material in accordance with Subsection 203.03.3.

2) Pond Area.

a) In areas of pond infill below groundwater, place Special Embankment (Rock Fill) within the pond areas extending 1 foot above current water surface elevation.

b) Proof roll with 44-kip grid roller or equivalent.

c) Place a 4-inch leveling course of Special Borrow across the top of the Special Embankment (Rock Fill) surface to create a level surface.

d) Place geotextile over the Special Borrow leveled surface, as shown on the plans and cross sections, starting 3 feet up the embankment slope and terminating the geotextile 3 feet from the embankment toe, in conformance with Subsection 622.03. Overlap the adjoining edges of the geotextile a minimum of 3 feet with the edge of the upgrade sheet over the edge of the downgrade sheet.

e) Place the first 12 inches of Special Borrow over the geotextile and compact to a minimum 95% of the maximum dry density, as determined by MT 210.

f) Place subsequent lifts of embankment material in accordance with Subsection 203.03.3.

D. Method of Measurement.

1) Special Borrow – Neat Line is measured in accordance with Section 203.

2) Special Embankment (Rock Fill) is measured in accordance with the Special Embankment (Rock Fill) Special Provision.

3) Geotextile is measured in accordance with Section 622.

E. Basis of Payment. Payment is full compensation for all labor, tools, equipment and other incidentals necessary to complete the work in accordance with the specifications and as directed by the Project Manager.

1) Special Borrow is paid in accordance with Section 203.

2) Special Embankment (Rock Fill) is paid in accordance with the Special Embankment (Rock Fill) Special Provision.

3) Geotextile is paid in accordance with Section 622.

28. SPECIAL EMBANKMENT (ROCK FILL)

A. Description. Place Special Embankment (Rock Fill) at the locations and grades shown on the project plans and cross sections, or as directed by the Project Manager.

B. Materials. Provide material for Special Embankment (Rock Fill) meeting the following gradation requirements:

Particle Size	Maximum percent passing
24 inch	100
2 inch	0-10

C. Construction. Place and compact Special Embankment (Rock Fill) in accordance with the requirements in the Embankment Foundation Treatment Special Provision.

D. Method of Measurement. Special Embankment (Rock Fill) is measured by volume in cubic yards calculated from the plan dimensions, or as ordered in writing by the Project Manager. There is no allowance for shrink, swell, compaction, waste, or other adjustments.

E. Basis of Payment. Special Embankment (Rock Fill) is paid at the unit price bid per cubic yard. Payment at the contract unit price is full compensation for all resources necessary to complete the item of work under the contract.

29. DEWATERING

A. Description. Groundwater may be encountered when excavating for culverts, stream channel excavation, and other structures. Review the project surface water conditions and soil boring logs and make appropriate provisions for groundwater and necessary dewatering. Project borings indicate that groundwater may be encountered at shallow depths. However, groundwater levels can fluctuate yearly, seasonally, and during precipitation events. All excavations that encounter groundwater need to be dewatered properly and kept dry at all times.

B. Submittals. Prior to starting excavation for any structure, the new stream channel, culvert, pipes, other drainage structure, submit a dewatering plan to the Project Manager. The dewatering plan must include the number, size, and proposed location of pumps and sumps that will be used to dewater the excavation as well as copies of all applicable permits. Allow 5 working days for the Project Manager to review the dewatering plan.

C. Construction. When groundwater is encountered in excavations, provide dewatering methods that will allow placement and compaction of backfill. Dewater the excavation to maintain a dry excavation bottom. Do not allow the excavation to fill with surface water or groundwater at any time.

D. Measurement and Basis of Payment. Include all costs associated with dewatering in the unit cost of the associated construction item.

30. PORTABLE SELF-CONTAINED COMMUNICATION TRAILER [210] (ADDED 8-13-20)

A. Description. Install, maintain, move, and remove portable communication trailer(s) capable of delivering Verizon wireless cellular signal as well as wireless internet connection with speeds greater or equal to 4gLTE in remote areas where cellular coverage is weak or nonexistent.

B. General

1) Provide a secure wireless G access point with a one-half mile range.

2) Provide a cellular network extender to allow for voice calls via the Verizon network.

3) Install devices a minimum of 24 hours prior to starting work. Locations are to be approved by the Project Manager.

4) Each device will be moved at the request of the Project Manager. Move and reset must be completed within 24 hours.

5) Include unlimited voice and data.

6) Provide technology support during working hours.

7) Install the device outside of the clear zone when practical.

Only remove the devices from the project with the approval of the Project Manager

C. Measurement and Payment.

1) Communications trailer install, maintain, and remove is measured by the each for each trailer that is installed, maintained, and removed.

2) Communications trailer move and reset is measured by the each, for each trailer that is moved and reset to the satisfaction of the Project Manager.

31. INCREASE IN TURBIDITY [208] (REVISED 10-8-15)

A. Description. Montana Fish, Wildlife and Parks (FWP) has determined that this project may cause a significant increase in turbidity.

B. Requirement. Contact the Department of Environmental Quality (DEQ) to determine narrative conditions required to meet short-term (318 Authorization) water quality standards and protect aquatic biota.

1) Complete and submit the Joint Application for Proposed Work in Montana's Streams, Wetlands, Floodplains, and Other Water Bodies (Application Revised 6-5-2015) and all required attachments, according to the applications instructions. Form can be down loaded from: http://dnrc.mt.gov/licenses-and-permits/stream-permitting.

2) Application fees are the responsibility of the Contractor.

3) Do not begin any work that will affect a Montana stream, wetland, floodplain, and/or other water body until a valid 318 Authorization is received from DEQ. Other permits/authorizations may also be required for the proposed work.

C. Basis of payment. Include the cost to obtain this permit in the mobilization bid item.

32. RIDE SPECIFICATION CATEGORY (SINGLE) [401] (REVISED 12-13-12)

This is a Category I project.

33. EMULSIFIED ASPHALT CHFRS-2P [402] (ADDED 10-10-19)

Furnish CHFRS-2P for areas specified in the contract. Furnish CHFRS-2P in accordance with the table below. Polymerize CHFRS-2P emulsions using at least 3% polymer by weight (mass) of the asphalt binder.

POLYMER MODIFIED CHFRS-2P EMULSIFIED ASPHALT

Property	Test Method	CHFRS-2P
Viscosity at 122 °F (50 °C), sec.	AASHTO T 59	100-400
Sieve, %	AASHTO T 59	0.1 max.
Settlement, 5 days, %	AASHTO T 59	5 max.
Demulsibility, %	AASHTO T 59	60 min.
Storage stability test, 1 day, %	AASHTO T 59	1 max.
Particle charge	AASHTO T 59	Positive

Property	Test Method	CHFRS-2P
Tests on residue by evaporation:		
% residue[1]	AASHTO T 59	65 min.
Oil Distillate	AASHTO T 59	0.2 max.
penetration, 100 g, 5 sec. at 77 °F (25 °C), dmm	AASHTO T 49	90-160
ductility at 77 °F (25 °C), 5 cm per minute, cm	AASHTO T 51	75 min.
elastic recovery, %	AASHTO T 301	55 min.
Softening Point, °F	AASHTO T 53	130 min.
Float Value @ 140 °F, Sec	AASHTO T 50	1800 min.
Viscosity @ 140 °F, Poise	AASHTO T 202	1300 min.
Solubility in Trichloroethylene, %	AASHTO T 44	95 min.

34. BASE PRICE FOR CONCRETE [551] (REVISED 12-17-20)

Price reductions measured by the cubic yard will be calculated using the greater of the contract bid price or $500 per cubic yard for the following items:

- Class Deck
- Class Overlay
- Class Structure
- Class Structure – Low Slump

Price Reductions for Class Drilled Shaft item will be calculated using the greater of the contract bid price or $300 per cubic yard.

35. SPECIAL BORROW

A. Description. Place special borrow at the locations shown in the plans, cross sections, or as directed by the Project Manager.

B. Materials. Provide material for special borrow consisting of a well-graded sand and gravel, free of organic and other deleterious material, meeting the AASHTO M 145 requirements for A-1-a group classification, with 100% passing the 6 inch sieve and a maximum of 8% by weight passing the number #200 sieve.

C. Construction. Compact special borrow in accordance with Section 203.

D. Method of Measurement. Special borrow is measured in accordance with Subsection 203.04.

E. Basis of Payment. Special Borrow is paid in accordance with Subsection 203.05.

36. CRUSHED TOP SURFACING (MODIFIED)

A. Description. Place Crushed Top Surfacing (Modified) at the locations shown on the project plans and cross sections.

B. Materials. Furnish Crushed Top Surfacing (Modified) from sources meeting Section 106 requirements to produce material, including added binder or blended material, in accordance with Section 301 and the gradation table below:

Requirement Sieve	Crushed Top Surfacing Percent Passing
¾"	100
No. 4	50-78
No. 8	37-67
No. 40	13-35
No. 200	8-15
Plasticity Index (PI) range: 4-12	

C. Construction. Place and compact Crushed Top Surfacing (Modified) in accordance with Subsection 301.03.

D. Method of Measurement. Crushed Top Surfacing (Modified) is measured in accordance with Subsection 301.04.

E. Basis of Payment. Crushed Top Surfacing (Modified) is paid in accordance with Subsection 301.05 utilizing Item No. 301 020 111 Select Surfacing.

37. CONSTRUCTION EQUIPMENT ON STRUCTURES [107] (ADDED 10-27-22)

A. Description: Requirements associated with the operation of equipment on structures.

B. Definition. The following definition applies to this special provision:

1) Equipment. Any vehicle or machine weighing more than 5000 pounds.

C. Construction Requirements. Do not use bridges as work platforms, work bridges, or to support or move equipment without the Project Manager's written approval. The Project Manager may require a full engineering submittal at their sole discretion.

1) For bridges having no posted load restrictions and no removal of deck concrete (not milled), provide a full engineering submittal for approval for all equipment utilizing outriggers on the structure and for any equipment not already approved under one of the following conditions:

a) Legal Loads. A vehicle that is a legal load as defined by Section 61-10 MCA

b) Pre-Approved Equipment. The equipment is currently listed on MDT’s Approved Construction Equipment List (ACEL) and will be operated according to any conditions stated in the ACEL.

2) For bridges with a posted load restriction or if bridge deck concrete is partially milled or removed, submit a full engineering submittal for approval for any of the following cases:

a) Equipment weight exceeds 25 tons.

b) Vehicle weight and configuration does not satisfy the posted load restriction.

c) More than one piece of equipment will be simultaneously located on a span.

d) Concrete removal results in significant debonding of the top mat of deck reinforcing steel. The Project Manager, in conjunction with the Bridge Bureau, will determine if significant debonding is present.

e) Repairs to bridge beams or truss members are specified in the contract and repairs are not complete.

f) Equipment outriggers will be used.

3) Full engineering submittal requirements. Submit an engineering analysis and report performed by a Professional Engineer registered in Montana.

a) Engineering analysis. Clearly describe loading conditions and assumptions and provide calculations. Investigate an envelope within which the equipment may function without damaging the structure or endangering workers or the public. MDT proposes the following topics, at a minimum. Provide additional information when necessary.

(1) Load Cases.

(a) Minimum suggested live load vehicles are Type 3 and Type 3S2 trucks in live load combinations from AASHTO "Manual for Condition Evaluation of Bridges."

(b) Consider all loads on the bridge including axle loads, outriggers, equipment dynamic forces, and wind forces on the load, the boom, and the equipment. Consider deflection and secondary force effects. Include traffic live load if the structure will carry traffic during equipment operations.

(c) Investigate different loading combinations for all configurations. Include the distribution of dead load and changing center-of-gravity of the equipment with and without load at different boom extensions, rotations, and elevations.

(2) Structural Effects. Identify critical members. Determine any conditions under which the equipment cannot safely operate.

b) Written Report. Provide a report containing a narrative summarizing the results of the analysis. Describe special measures necessary to protect the structure through all phases of the equipment's positioning and use. Include drawings as necessary and indicate any minimum equipment clearances to relevant portions of the structure and to traffic flow. Estimate the work's duration.

c) MDT will consider equipment submitted under this contract for addition to the ACEL.

D. Method of Measurement. Work associated with this provision is not measured for payment.

E. Basis of Payment. Include all costs associated with the requirements of this provision in the lump sum bid for Structure Analysis. Exception: If a full engineering analysis is required as a result of top mat debonding alone (none of the other criteria listed under C.2 are met) then it will be considered extra work and considered for time extension under 108.07.5.

38. BRIDGE DEMOLITION NOTIFICATION

Prior to demolition of structures in Montana, including highway bridges, a notification form is required to be submitted to the Montana DEQ Asbestos Control Program. The Montana Demolition Notification form MTACP02 is available through the program internet site at http://deq.mt.gov/Public/asbestos/Forms.

An inspection of the bridge has been conducted, including a review of as-built drawings and inspection photos for the bridge structures, and sampling of suspect materials. No asbestos containing materials have been identified. A copy of the asbestos inspection is available from the Department.

Submit the completed form to the DEQ and the Project Manager at least 10 calendar days prior to commencement of any bridge demolition activities. Provide a copy of the notification acknowledgement to the Project Manager upon receipt from the DEQ.

39. ALTERNATE PRESTRESSED BEAM SECTIONS (REVISED 6-6-12)

A. Description

1) General. The contractor may elect to use an alternate prestressed beam shape if the resulting change in superstructure depth is less than or equal to the maximum allowed increase shown in the table below.

Bridge at Station	Maximum Allowed Increase in Superstructure Depth
135+40.48	0’-0”

2) Submittals.

a) Provide two sets of designs that meet the AASHTO and Montana Specifications shown on the Plans, to the Project Manager for review and approval. Show calculations for the beams, slab and reinforcing steel. Provide design information as required to either validate or alter the substructure as shown.

b) Provide five sets of shop drawings to the Project Manager meeting the requirements of Section 553 of the Standard Specifications. Shop drawings may be submitted on 11” x 17” sheets and may be furnished in Adobe Acrobat Reader (.pdf) format in lieu of hard copies. Have a professional engineer licensed in Montana sign, stamp or seal these plans and designs. Do not fabricate beams prior to receiving approved drawings.

c) Provide a revised set of design drawings showing all changes to the bridge. Prepare the drawings using a CAD system. Submit the drawings in Adobe Acrobat Reader (.pdf) format. Include a cover letter signed by the supervising engineer transmitting the finished

drawings. In addition, provide the CAD files used to detail the revisions. Upon request, the original design drawings will be made available.

B. Measurement and Payment. The beam and slab shown on the plans will be the configuration measured or calculated for payment. Furnish and install at no cost to the state any additional beam footage, slab concrete or slab reinforcing steel, or substructure concrete or reinforcing steel required because of the use of alternate beam shapes.

40. MODIFIED BRIDGE DECK CONCRETE WATER CURE [551] (REVISED 3-2-2020)

A. Description. Protect full depth bridge deck concrete from shrinkage and thermal cracking.

B. Materials.

1) Burlap. Furnish burlap in accordance with Subsection 717.01.2.

2) Water. Furnish water in accordance with Subsection 713.01.

3) Temperature data logging. Submit for approval a temperature monitoring system having at least 4 channels, capable of measuring internal concrete and ambient temperatures, recording time and temperature at 30-minute intervals or less for a minimum of 14 days, with an accuracy of 1 degree or less.

C. Construction Requirements.

1) For each concrete placement, install 4 probes at 3 locations on the deck (12 probes total per placement) in concrete a minimum of 5 feet away from any edge or joint. For placements that are less than 10 cubic yards, place only 4 probes at one location. Place and secure probes at 4 depths within the deck as follows:

- at least 2 feet above deck surface. This probe may be moved to the edge of deck to facilitate attachment;
- to the top of the top mat of rebar;
- midway between the 2 mats of rebar, and;
- to the bottom of the bottom mat of rebar.

2) Start recording temperatures at least 1 hour prior to concrete placement. Ensure probes read within 3.6 °F (2 °C). Replace probes that do not. Protect probes during concrete placement. Relocate any displaced probes within wet concrete. Monitor and record ambient air temperature while recording probe temperatures. Monitor concrete temperature probes until concrete is within 5 °F (2.8 °C) of ambient, and vertical temperatures through the deck thickness are uniform (within 10 °F [5.5 °C]) and concrete is at least 96 hours old (72 hours old if concrete does not contain silica fume).

Exception: for cold weather concrete, monitor temperatures until cold weather protection is removed.

3) Increase ambient humidity by fogging above finished concrete and concrete forms/rebar using one or more 3000 psi (21MPa) or greater pressure washer powered fogging wands. Do not:

- use low pressure spray nozzles;
- use fogging systems attached to the screed;
- use fogging, or other methods, to add finishing water to unfinished concrete;
- allow water to drip, flow, or puddle on the concrete surface during fog misting, when placing the burlap, or at any time before the concrete has achieved final set.

4) Maintain the forward edge of concrete placement nearly parallel to and not more than 6 feet (1.8 m) ahead of the strike-off.

5) Use catwalk(s) to facilitate uniform application of the fog mist across the entire deck and to facilitate placement of the wet burlap on the fresh concrete surface. Apply a fog mist as necessary to maintain a moist surface on the finished concrete before and after covering with burlap until the water cure process is operational.

6) Start the water cure as soon as possible without damaging the concrete finish by applying pre-moistened burlap to maintain a water-saturated environment on the concrete surface. Meet the following requirements for the water cure.

a) Ensure the temperature of all water used in the water cure is within 20 °F (17 °C) of the in place concrete temperature.

b) Presoak the burlap by immersing it in water for at least 24 hours prior to placement.

c) Apply the wet burlap to the concrete surface no later than 15 minutes after striking off and finishing the surface of deck-slab concrete.

d) Place soaker hoses when the concrete has hardened sufficiently to prevent marring of the surfaces.

e) Keep the entire deck surface saturated for 3 hours (1 hour for cold weather concrete, unless otherwise approved by the Project Manager) after concrete has reached maximum temperature as recorded by the probes. Immediately turn off soaker hoses and apply clear plastic sheeting over the wet burlap to keep concrete moist.

f) Apply cold weather insulation blankets to minimize the rate of cooling of concrete immediately following the installation of plastic sheeting.

g) Remove all curing and allow deck to dry when concrete is within 5 °F (2.8 °C) of ambient, and vertical temperatures through deck thickness are uniform (within 10 °F [5.5 °C]) and the concrete is at least 96 hours old (72 hours old if concrete does not contain silica fume).

D. Method of Measurement and Basis of Payment. Fogging and water cure will not be measured separately for payment. Include all costs associated with this provision in the concrete receiving the cure.

41. BRIDGE DECK REINFORCING STEEL COVER [564] (REVISED 10-28-21)

A. Description. The Department may measure the depth of the concrete cover over the top reinforcing steel of the bridge deck(s) and the deck thickness, using Ground Penetrating Radar (GPR) equipment.

B. Construction Requirements. Schedule 3 business days for the Department to access the deck. Ensure the deck is completely bare during the 3 business-day period, or until the test is complete, to allow full access to the entire surface. The timeframe for access to the bridge deck is after the water cure has been completed and prior to opening the bridge deck to traffic. The Department will perform the test only on a dry deck. The test may be completed either prior to or after transverse deck grooving or rail construction. If inclement weather prevents the test from being performed within the 3 business days provided, the test will be cancelled or rescheduled. Provide the Project Manager a minimum of 14 calendar days' notice for the 3 business-day access period. The Project Manager will coordinate the test with the Department's CES Bridge Reviewer.

C. Method of Measurement and Basis of Payment. Consider all costs associated with this provision and its requirements incidental to performance of the work. Include the costs in the cost of other items.

42. CONCRETE - CLASS STRUCTURE LOW SLUMP (REVISED 9-9-21)

A. Description. Furnish Concrete – Class Structure Low Slump for all full depth bridge deck concrete, bridge barrier rail, and metal bridge rail curbing.

B. Construction Requirements. Furnish material meeting the requirements of Concrete – Class Structure, with the following modifications:

1) The maximum target value for slump is 3-inches with a tolerance of plus 1½-inches to minus 2-inches.

2) When used in bridge barrier rail or metal bridge rail curbing, the target slump may be adjusted to a maximum of 6-inches.

3) Overall Lot Pay Factor. The overall lot pay factor will be calculated for all bid items using Concrete – Class Structure Low Slump, except metal bridge rail.

4) Applicable Pay Factors. See Table 551-9 for applicable pay factors. Pay factors for strength, air content, and gradation are applicable. The pay factor for permeability is not applicable.

C. Measurement. Concrete – Class Structure Low Slump is measured by the cubic yard.

D. Basis of Payment. Include all costs associated with this provision in the bid price for Concrete – Class Structure Low Slump (CUYD).

43. WATERPROOFING MEMBRANE

A. Description. This work is the installation of sheet membrane waterproofing between the bridge end backfill and precast concrete substructure elements.

B. Materials. Use a polymeric or rubberized asphalt self-adhering waterproofing membrane, 60-mils thick consisting of 56-mils of membrane and 4-mils of cross-laminated polyethylene carrier film. Meet or exceed the following requirements:

Thickness	60-mils	ASTM D 3767
Tensile Strength (Membrane)	5000-psi	ASTM D 412
Tensile Strength (Film)	325-psi	ASTM D 882
Elongation	350% min	ASTM D 412
Permeance	0.05 Perm, max	ASTM E 96
Flexibility @ -20°F	Unaffected	ASTM D 1970
Crack Cycling @ -25°F (100 cycles)	Unaffected	ASTM C836
Peel Strength	10.0 lb/in	ASTM D903
Lap Adhesion	8.0 lb/in	ASTM D 1876
Puncture Resistance	48-lb, min	ASTM E 154
Soil Burial	16-weeks, No affect	GSA-PBS 07121
Water Absorption	0.1% by wt.	ASTM D 570
Hydrostatic Head	230-ft	ASTM D 5385

C. Construction Requirements

1) Quality Assurance. The applicator must have experience installing the same or similar material waterproofing membrane systems.

2) Deliver materials to the project site in original factory-sealed, unopened containers. Protect materials from direct sunlight until ready for use.

3) Install the waterproofing membrane at the proper temperature, with the adequate surface preparation, and in the layers and overlap specified in the product manufacturer's printed installation instructions.

D. Submittals. Submit the manufacturer's product literature and installation instructions for approval by the Project Manager.

E. Method of Measurement and Basis of Payment. Include all costs associated with the requirements of this provision in the cost of Concrete - Class Structure.

44. CORRUGATED POLYETHYLENE APPROACH PIPE [603] (REVISED 12-12-19)

A. Description. Corrugated polyethylene pipe is an option to RCP, CSP or CAP for approach drainage pipes as indicated in the Approach Pipe Summary.

B. Material. Meet the requirements of Subsection 708.07, and of Type S pipe as defined in Section 4 of AASHTO M294.

C. Construction Requirements. Provide steel Flared End Terminal Sections (FETS) or Road Approach Culvert End Treatment (RACET) in accordance with Detailed Drawing 603

02 and 603 14. Provide hardware for connection of the end section to the polyethylene pipe as approved by the Project Manager.

D. Basis of Payment. Cost of materials, handling, tools, equipment and labor necessary to accomplish the work is included in the contract unit price bid per foot (meter) of drainage pipe.

45. BASIC BID PIPE – CONCRETE [603] (ADDED 6-12-14)

The type and quantity of material for bidding is listed in the contract in columns under the heading “Basic Bid Items”. The information in these columns is what would be required to complete the planned installation using the “Basic Bid Pipe,” which is concrete, when it is an option. If concrete is not an option, steel pipe is the basic bid pipe. Include terminal sections, and connection hardware, where required.

46. FOREST SERVICE SIGNS [619] (REVISED 8-12-03)

A. Description. Reset existing signs owned by the U.S. Forest Service and shown on the plans within the right-of-way or clear zone limits of this project when they do not meet current FHWA and Department safety standards. Replace those signs or posts/poles determined by the Project Manager to be unsuitable for reinstallation through natural deterioration or damage.

B. Construction Requirements. Assure that reset or reinstalled signing and supports meet current breakaway device, support spacing, lateral clearance, mounting height and reflectivity requirements of the Department and FHWA.

C. Measurement and Payment. Payment of cost and labor, equipment and materials to accomplish this signing is by the Department of Transportation. Designs of new U.S.F.S. signs to accomplish this work are provided to the Department’s Traffic Engineering Section by the U.S.F.S. National Forest office having jurisdiction over the signs and are available upon written request or by calling (406) 444-0463 or 444-6222.

47. TRAFFIC CONTROL–DETOUR

Both lanes of Highway 287 must remain open to public traffic during completion of the contract. Refer to Coordination with Adjacent Stream Restoration Project and Work Sequence special Provision.

48. SIGNING REQUIREMENTS [619] (ADDED 11-17-22)

Signing plans and sign sheeting requirements have been changed as follows:

A. Replace Sign Face Only. Rescind and replace Subsection 619.03.1D with the following:

Replace Sign Face. Signs designated “Replace Sign Face” are to be removed from the supports and replaced with the specified new signs using the existing supports at the same mounting height as the replaced sign, unless otherwise indicated in the plans.

B. Sign Sheeting and Delineators

1) Sheeting. Furnish ASTM Type XI retro-reflective sheeting for all signs unless otherwise shown in the plans.

2) Delineators. Furnish ASTM Type IV retro-reflective sheeting for all reflectors and panels.

3) Color. Furnish the specified color shown in the contract.

49. OPTIONAL USE OF DIGITALLY PRINTED SIGNS [704] (ADDED 12-9-21)

A. Description. Requirements for digitally fabricated signs.

B. General.

1) Submit the manufacturer's certificate of compliance a minimum of 14 calendar days prior to sign installation. The certification of compliance must certify that the equipment, materials, operators, and processes have been certified by the sheeting manufacturer.

2) Digitally printed ink systems must meet ASTM D4956 color standards.

3) Follow the sheeting manufacturer's quality control process during the manufacturing process.

4) Apply a clear UV protective overlay to the entire sign face. Ensure the overlaminate complies with the retroreflective sheeting manufacturer's recommendations.

5) Furnish black inks that are entirely opaque.

6) Furnish signs free of printing lines. Ensure inks are homogeneously applied.

7) Store, handle, and transport signs in accordance with the manufacturer's recommendations to prevent damage to the sign.

50. RIPRAP REVEGETATION

A. Description. This work is the incorporation of infill material between riprap voids and revegetating material on riprap surfaces outside the vertical projection of the bridge.

B. Materials

1) Riprap infill material. Provide Filter Material No. 2, or native material of a similar gradation approved by the Project Manager.

2) Furnish topsoil meeting Subsection 713.05, in accordance with Subsection 610.03.1, or a locally obtained topsoil with less than 30% coarse fragments (>0.2 inch) by weight.

3) Rolled Erosion Control Blanket. Furnish Long Term Blanket from the Department's QPL. Use only 100% biodegradable blanket that does not contain polypropylene plastic.

4) Seed. Furnish the following seed mix. Use individual substitute species only if the recommended species is not available and substitution is approved by MDT's Reclamation Specialist.

Reclamation Seed Mixture			Broadcast Seeding Rate		
Scientific Name	Common Name	Variety	PLS/ sq.ft.	% of Mix	Pounds PLS/ Acre
Elymus trachycaulus	Slender wheatgrass	Pryor, First Strike or Revenue	6	5	2.0
Elymus lanceolatus	Thickspike wheatgrass	Critana	11	8	3.0
Nassella viridula	Green needlegrass	Lodorm	13	10	3.0
Poa secunda	Big bluegrass	Sherman	20	15	1.0
Elymus canadensis	Canada wildrye	Mandan or Helena Valley	11	8	4.0
Leymus cinereus	Basin wildrye	Magnar or Trailhead	13	10	4.0
Deschampsia cespitosa	Tufted hairgrass	Peru Creek	57	44	1.0
		GRAND TOTAL	132	100	18.0

C. Construction Requirements.

1) Fill the spaces and voids between the rocks with riprap infill material. Place a sufficient amount of material over the riprap, so that after settling and working into the voids, the level of filter material comes to the very top of the rock.

2) Place the topsoil to a 6-inch depth over the infill material outside the vertical projection of the bridge. Place material in a manner that creates a smooth, uniform surface for seeding.

3) Hand broadcast seed immediately after soil placement, regardless of time of year, with the seed mixture and rates listed. Scarify, harrow or rake the soil immediately prior to and following seeding to incorporate seed to a depth of ¼ to ½ inch into the soil.

4) Install the long-term erosion control blanket immediately following broadcast seeding and scarification as shown in the plan details. Secure blanket with 12-inch wooden stakes per manufacturer spacing recommendation.

D. Method of Measurement and Basis of Payment. The infill material, topsoil placement, erosion blanket/mulch, and seeding are measured and paid for as RIPRAP REVEGETATION at the contract unit bid price per square yard.

51. REVEGETATION

A. Description. This work consists of providing the necessary equipment and materials to accomplish revegetation of all areas disturbed by construction activities, and/or as directed by the project manager.

B. Materials. Furnish the following seed mix. Use substitute species only if the recommended species is not available and substitution is approved by MDT's reclamation specialist.

Reclamation Seed Mixture			Drill Seeding Rate		
Scientific Name	Common Name	Variety	PLS / sq. ft.	% of Mix	Pounds PLS/ acre
Elymus trachycaulus	Slender wheatgrass	Pryor or First Strike	6	9	2.0
Elymus lanceolatus	Thickspike wheatgrass	Critana	11	14	3.0
Nassella viridula	Green needlegrass	Lodorm	13	17	3.0
Pseudoroegneria spicata	Bluebunch wheatgrass	Goldar or Columbia	10	13	3.0
Festuca idahoensis	Idaho fescue	Joseph, Nezpurs or Winchester	10	14	1.0
Poa secunda	Big bluegrass	Sherman	20	28	1.0
Phacelia hastata	Silverleaf phacelia	Stucky ridge or VNS	4	5	1.0
		GRAND TOTAL	74	100	14.0

C. Construction Requirements.

1) Import and salvage sufficient quantities of topsoil to place 4 inches over all disturbed areas. It is estimated that 950 CY of topsoil may be salvaged. Condition and drill seed with the seed mix and equivalent rates in accordance with Subsection 610.03.2.

2) Areas too steep, narrow, or inaccessible with drill equipment can be broadcast seeded, at double the seeding rates. Following broadcast seeding, scarify the areas to incorporate the seed into the upper ¼ to ½ inch of soil.

D. Basis of Payment. Topsoil import and salvage, replacement, soil conditioning and reseeding are paid for as REVEGETATION at the Contract unit price per lump sum.

END OF SECTION I

MDT NONDISCRIMINATION AND
DISABILITY ACCOMMODATION NOTICE

Montana Department of Transportation ("MDT") is committed to conducting all of its business in an environment free from discrimination, harassment, and retaliation. In accordance with State and Federal law MDT prohibits any and all discrimination and protections are all inclusive (hereafter "protected classes") by its employees or anyone with whom MDT does business:

Federal protected classes	State protected classes
Race, color, national origin, sex, sexual orientation, gender identity, age, disability, income-level & Limited English Proficiency	Race, color, national origin, parental/marital status, pregnancy, childbirth, or medical conditions related to pregnancy or childbirth, religion/creed, social origin or condition, genetic information, sex, sexual orientation, gender identification or expression, ancestry, age, disability mental or physical, political or religious affiliations or ideas, military service or veteran status, vaccination status or possession of immunity passport

For the duration of this contract/agreement, the PARTY agrees as follows:

(1) Compliance with Regulations: The PARTY (hereinafter includes consultant) will comply with all Acts and Regulations of the United States and the State of Montana relative to Non-Discrimination in Federally and State-assisted programs of the U.S. Department of Transportation and the State of Montana, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

(2) Non-discrimination:

a. The PARTY, with regard to the work performed by it during the contract, will not discriminate, directly or indirectly, on the grounds of any of the protected classes in the selection and retention of subcontractors, including procurements of materials and leases of equipment, employment, and all other activities being performed under this contract/agreement.
b. The PARTY will provide notice to its employees and the members of the public that it serves that will include the following:
    i. A statement that the PARTY does not discriminate on the grounds of any protected classes.
    ii. A statement that the PARTY will provide employees and members of the public that it serves with reasonable accommodations for any known disability, upon request, pursuant to the Americans with Disabilities Act as Amended (ADA).
    iii. Contact information for the PARTY's representative tasked with handling non-discrimination complaints and providing reasonable accommodations under the ADA.
    iv. Information on how to request information in alternative accessible formats.

c. In accordance with Mont. Code Ann. § 49-3-207, the PARTY will include a provision, in all of its hiring/subcontracting notices, that all hiring/subcontracting will be on the basis of merit and qualifications and that the PARTY does not discriminate on the grounds of any protected class.

(3) Participation by Disadvantaged Business Enterprises (DBEs):

a. If the PARTY receives federal financial assistance as part of this contract/agreement, the PARTY will make all reasonable efforts to utilize DBE firms certified by MDT for its subcontracting services. The list of all currently certified DBE firms is located on the MDT website at mdt.mt.gov/business/contracting/civil/dbe.shtml

b. By signing this agreement, the PARTY assures MDT that:

The contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

c. The PARTY must include the above assurance in each contract/agreement the PARTY enters.

(4) Solicitation for Subcontracts, Including Procurement of Materials and Equipment: In all solicitations, either by competitive bidding, or negotiation, made by the PARTY for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the PARTY of the PARTY's obligation under this contract/agreement and all Acts and Regulations of the United States and the State of Montana related to Non-Discrimination.

(5) Information and Reports: The PARTY will provide all information and reports required by the Acts, Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information and its facilities as may be determined by MDT or relevant US DOT Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the PARTY will so certify to MDT or relevant US DOT Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

(6) Sanctions for Noncompliance: In the event of a PARTY's noncompliance with the Non- discrimination provisions of this contract/agreement, MDT will impose such sanctions as it or the relevant US DOT Administration may determine to be appropriate, including, but not limited to:

a. Withholding payments to the PARTY under the contract/agreement until the PARTY complies; and/or

b. Cancelling, terminating, or suspending the contract/agreement, in whole or in part.

(7) Pertinent Non-Discrimination Authorities: During the performance of this contract/agreement, the PARTY, for itself, its assignees, and successor in interest, agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Federal

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21;
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq.*), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airways Improvement Act of 1982, (49 U.S.C. § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (broadened the scope, coverage, and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975, and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients, and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibits discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 CFR parts 37 and 38;
- The Federal Aviation Administration's Non-Discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which prevents discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English Proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);

- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. § 1681 *et seq.*).

- Executive Order 13672 prohibits discrimination in the civilian federal workforce on the basis of gender identity and in hiring by federal contractors on the basis of both sexual orientation and gender identity.

State

- Mont. Code Ann. § 49-3-205 Governmental services;

- Mont. Code Ann. § 49-3-206 Distribution of governmental funds;

- Mont. Code Ann. § 49-3-207 Nondiscrimination provision in all public contracts.

(8) Incorporation of Provisions: The PARTY will include the provisions of paragraph one through seven in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and/or directives issued pursuant thereto. The PARTY will take action with respect to any subcontract or procurement as MDT or the relevant US DOT Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the PARTY becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the PARTY may request MDT to enter into any litigation to protect the interests of MDT. In addition, the PARTY may request the United States to enter into the litigation to protect the interests of the United States.

FEDERAL AID PROJECT CRSII-STPB 29-1(64)17
BRIDGE REPLACEMENT
GRANITE CR - 3M NW VIRGINIA CITY
CONTROL NUMBER 8932000
PROJECT LOCATION STATE MAP - MONTANA

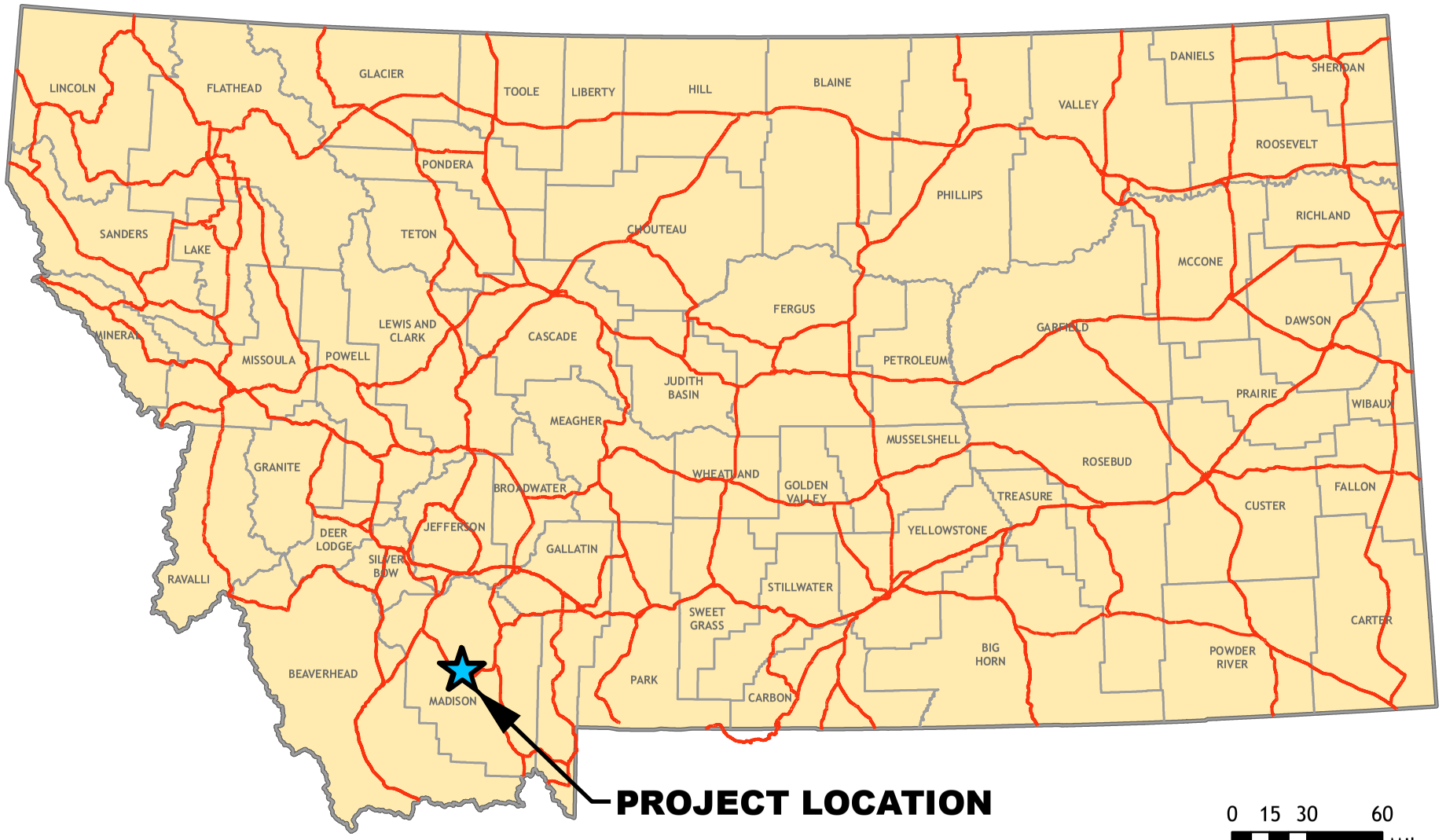
MONTANA
Department of Transportation

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SECTION II

5 of 22

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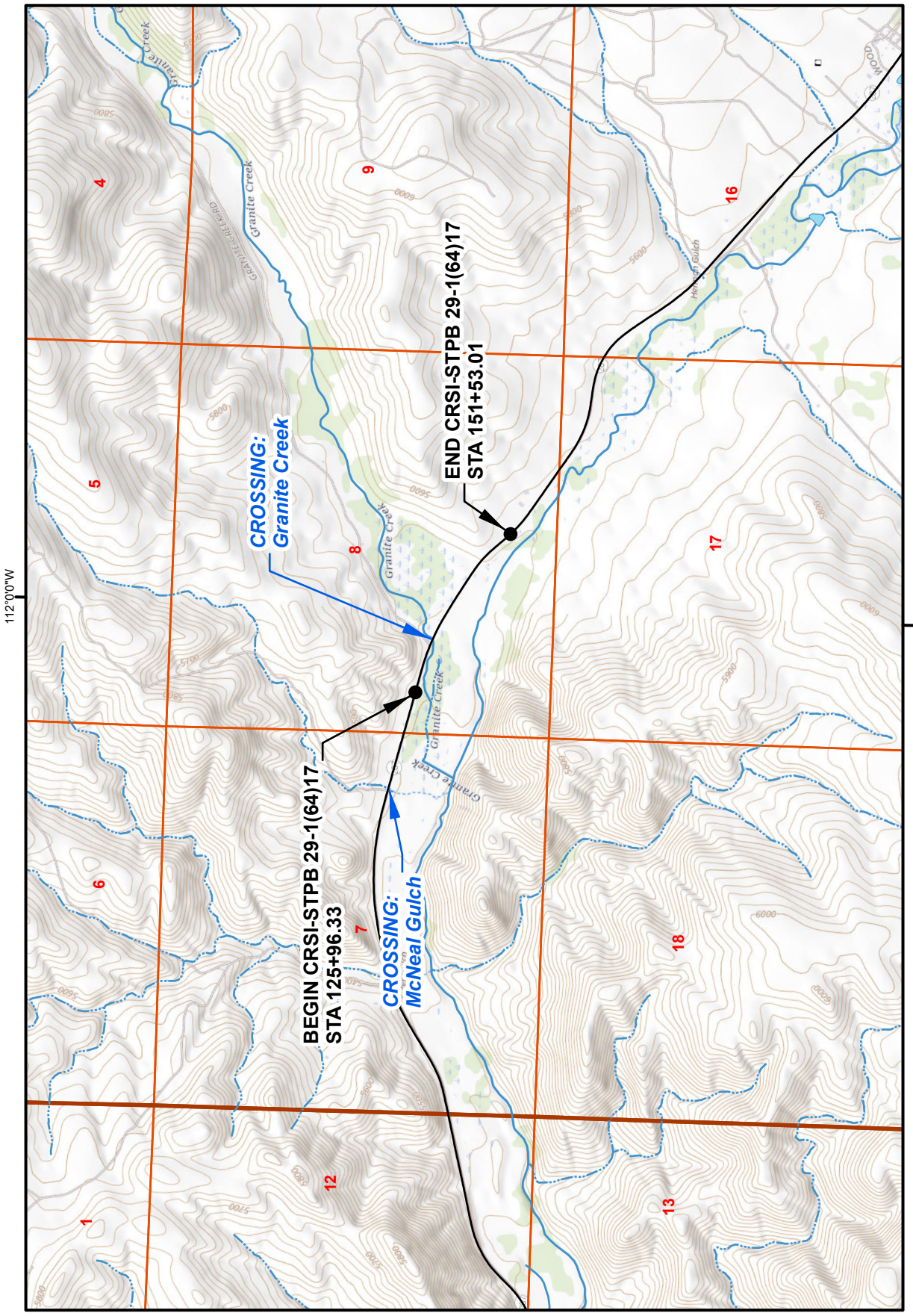


FEDERAL AID PROJECT CSRI-STPB 29-1(64)17
BRIDGE REPLACEMENT
GRANITE CR - 3M NW VIRGINIA CITY
CONTROL NUMBER 8534000
PROJECT LOCATION QUAD MAP - MADISON COUNTY

MONTANA
Department of Transportation

N

0 500 1,000 2,000 Feet



MDT Boring Log Descriptive Terminology

Key to Soil Symbols and Terms

01/18/12

MONTANA MDT DEPARTMENT OF TRANSPORTATION
Geotechnical Section

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS (MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE)	GRAVEL AND GRAVELLY SOILS (MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE)	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	Well-graded gravels, gravel sand mixtures, little or no fines.
				GP	Poorly graded gravels, gravel-sand mixtures, little or no fines.
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	Silty gravels, gravel-sand-silt mixtures.
				GC	Clayey gravels, gravel-sand-clay mixtures.
	SAND AND SANDY SOILS (MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE)	CLEAN SANDS (LITTLE OR NO FINES)		SW	Well-graded sands, gravelly sands, little or no fines.
				SP	Poorly graded sands, gravelly sands, little or no fines.
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	Silty sands, sand-silt mixtures.
				SC	Clayey sands, sand-clay mixures.
FINE GRAINED SOILS (MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE)	SILTS AND CLAYS (LIQUID LIMIT LESS THAN 50)			ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
				CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
				OL	Organic silts and organic silty clays of low plasticity.
	SILTS AND CLAYS (LIQUID LIMIT GREATER THAN 50)			MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
				CH	Inorganic clays of high plasticity, fat clays.
				OH	Organic clays of medium to high plasticity, organic silts.
HIGHLY ORGANIC SOILS				PT	Peat and other highly organic soils.

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

Order of Descriptors

- Group Name
- Consistency or Relative Density
- Moisture Condition
- Color
- Particle size descriptor(s) (coarse grained soils only)
- Angularity of coarse grained soils
- Other relevant notes

Criteria For Descriptors

Consistency of Fine Grained Soils

Consistency	N-Value (uncorrected)
Very Soft	< 2
Soft	2 - 4
Medium Stiff	5 - 8
Stiff	9 - 15
Very Stiff	16 - 30
Hard	> 30

Apparent Density of Coarse Grained Soils

Relative Density	N-Value (uncorrected)
Very Loose	< 4
Loose	4 - 10
Medium Dense	11 - 30
Dense	31 - 50
Very Dense	> 50

Moisture Condition

Dry -Absence of moisture, dusty, dry to the touch.
Moist -Damp, but no visible water.
Wet -Visible free water.

Definition of Particle Size Ranges

Soil Component	Size Range
Boulder	> 12 in (300 mm)
Cobble	3 in (75 mm) - 12 in (300 mm)
Gravel	No. 4 Sieve (4.75 mm) to 3 in (75 mm)
Sand	No. 200 (0.075 mm) to No. 4 Sieves (4.75 mm)
Silt	< No. 200 Sieve (0.075 mm)*
Clay	< No. 200 Sieve (0.075 mm)*

*Atterberg limits and chart below to differentiate between silt and clay.

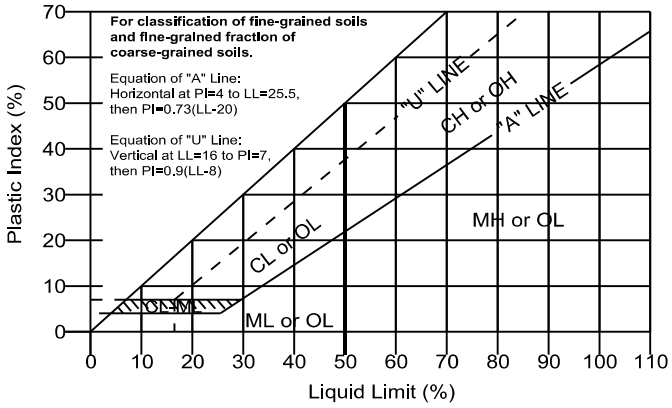
Notes

See Soil Boring Information Special Provision.

SPT (Standard Penetration Test-ASTM D1586):
The number of blows of a 140 lb (63.6 kg) hammer falling 2.5 ft (750 mm) used to drive a 2 in (50 mm) O.D. Split Spoon sampler for a total of 1.5 ft (0.45 m) of penetration.
Written as follows:
first 0.5 ft (0.15 m) - second 0.5 ft (0.15 m) - third 0.5 ft (0.15 m) (ex: 1-3-9)
Note: if the number of blows exceeds 50 before 0.5 ft (0.15 m) of penetration is achieved, the actual penetration rounded to the nearest 0.1 ft (0.03 m) follows the number of blows in parentheses (ex: 12-24-50 (0.09 m), 34-50 (0.4 ft), or 100 (0.3 ft)).WR denotes a zero blow count with the weight of the rods only.
WH denotes a zero blow count with the weight of the rods plus the weight of the hammer.

MC=Moisture Content, LL=Liquid limit, PL=Plastic Limit
-200%=percent soil passing 200 sieve, DD=Dry Density

Soil Classifications are Based on the Unified Soil Classification System, ASTM D2487 and D2488. Also included are the AASHTO group classifications (M145). Descriptions are based on visual observation, except where they have been modified to reflect results of laboratory tests as deemed appropriate.



Angularity of Coarse-Grained Particles

Angular -Particles have sharp edges and relative plane sides with unpolished surfaces.
Subangular -Particles are similar to angular description, but have rounded edges.
Subrounded-Particles have nearly plane sides, but have no edges.
Rounded -Particles have smoothly curved sides and well-rounded corners and edges.

Example soil description: Sandy FAT CLAY (CH), soft, wet, brown. (A-7)

MDT Boring Log Descriptive Terminology
Key to Rock Symbols and Terms

01/18/12

MONTANA MDT DEPARTMENT OF TRANSPORTATION
Geotechnical Section

Rock Type	Symbol	Rock Type	Symbol	Rock Type	Symbol
Argillite		Dolomite		Quartzite	
Basalt		Gneiss		Rhyolite	
Bedrock (other)		Granitic		Sandstone	
Breccia		Limestone		Schist	
Claystone		Siltstone		Shale	
		Conglomerate			

Order of Descriptors

- Rock Type
- Color
- Grain size (if applicable)
- Stratification/Foliation (as applicable)
- Field Hardness
- Other relevant notes

Criteria For Descriptors
Grain Size

Description	Characteristic
Coarse Grained	-Individual grains can be easily distinguished by eye
Fine Grained	-Individual grains can be distinguished with difficulty

Stratum Thickness

Thickly Bedded	3-10 ft (1-3 m)
Medium Bedded	1-3 ft (300 mm - 1 m)
Thinly Bedded	2-12 in (50-300 mm)
Very Thinly Bedded	< 2 in (50 mm)

Rock Field Hardness

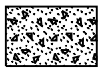
Very Soft	-Can be carved with knife. Can be excavated readily with point of rock hammer. Can be scratched readily by fingernail.
Soft	-Can be grooved or gouged readily by knife or point of rock hammer. Can be excavated in fragments from chips to several inches in size by moderate blows of the point of a rock hammer.
Medium	-Can be grooved or gouged 0.05 in (2 mm) deep by firm pressure of knife or rock hammer point. Can be excavated in small chips to pieces about 1 in (25 mm) maximum size by hard blows of the point of a rock hammer.
Moderately hard	-Can be scratched with knife or pick. Gouges or grooves to 0.25 in (6 mm) can be excavated by hard blow of rock hammer. Hand specimen can be detached by moderate blows.
Hard	-Can be scratched with knife or pick only with difficulty. Hard hammer blows required to detach hand specimen.
Very Hard	-Cannot be scratched with knife or sharp rock hammer point. Breaking of hand specimens requires several hard blows of a rock hammer.

Notes:

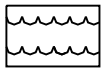
UCS = Unconfined Compressive Strength obtained from laboratory testing at the given depth.

See Soil Boring Information Special Provision.

Miscellaneous Soil/Rock Symbols and Terms

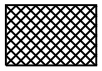

Concrete

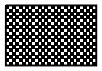

Asphalt

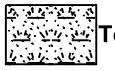

Water


Boulders and Cobbles


Coal


Fill


Millings


Topsoil

-Soil and Rock descriptions are based on visual observation, except where they have been modified to reflect results of laboratory tests as deemed appropriate.

Explanation of Text Fields in Boring Logs:

Material Description: Lithologic Description of soil or rock encountered.

Remarks: Comments on drilling, including method, bit type, and problems encountered.
Unless stated on logs as being surveyed by district survey, all locations are considered approximate.

General Notes

- Descriptions on these boring logs apply only at the specific boring, and at the time the borings were made. These logs are not warranted to be representative of subsurface conditions at other locations or times.
- Water level observations apply only at the specific boring, and at the time the borings were made. Due to the variability of groundwater measurements given the type of drilling used, and the stratification of the soil in the boring, these logs are not warranted to be representative of groundwater conditions at other locations or times.
- Other terms may be used as descriptors, as defined by the profession.

Operation Types: Auger, Casing Advancer, Core Barrel, Drive Casing

Sample Types: Split Spoon, Shelby, Bulk Sample, Grab Sample, Cone Penetrometer, Vane Shear, Special Samplers, Testpit

Example Rock Log

SANDSTONE, gray, fine grained, thickly bedded, hard field hardness.

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LOG OF BORING

Boring 8932000-ST-1

Project: Granite Creek - 3 M NW Virginia City		**Rig:** CME 75HT **Hammer:** Auto	**Boring Location** N: 400980.4 ft **Coordinates** E: 1326844.9 ft	**Station:** 153 + 41 **Offset:** 8 ft R
Project Number: 21-4029S	**UPN:** 8932000	**Boring Diameter:** 9"	**System:** MT S.P. (E) **Datum:** NAD83	**Top of Boring Elevation:** 5449.1 ft
Date Started: 7/29/21	**Date Finished:** 7/29/21	**Drilling Fluid:** None	**Location Source:** GWE Survey	**Elevation Source:** GWE Survey
Driller: E. Hollibaugh **Logger:** C. Hopkins		**Abandonment Method:** Backfilled with Cuttings	**Township, Range, and Section:** 6S 3W 8 - DCC	

Depth (ft) / Elev. (ft)	Operation	Sample Type	Recovery (%)	RQD (%)	Blow Count	Lithology	Material Description	Depth (ft) / Elev. (ft)	MC (%)	LL	PL	-200 (%)	DD (pcf)	Remarks and Other Tests
							0-8" Existing Asphalt Pavement.	0.7 / 5448.4	2	18	16	12		Bulk Bag: 2'-4'
			100		8 - 6 - 5		BASE COURSE, Silty SAND with gravel (SM), medium dense, brown, moist, fine to coarse grained, subangular to subrounded, [A-1].	1.5 / 5447.6	13					Pen: 2 tsf MDD: 129.6 pcf OMC: 8.6%
			72		3 - 4 - 6		FILL, Clayey SAND (SC), loose to medium dense, light brown, moist, fine to coarse grained, subangular to subrounded, [A-4]. Some gravel.		8	22	13	38		Pen: 2½ tsf
5 / 5444.1			100		6 - 11 - 9				10					Pen: 4+ tsf
							Silty SAND (SM), loose to medium dense, light brown, moist, fine to coarse grained, [A-4]. (Alluvium).	6.0 / 5443.1	10					
			6		6 - 10 - 12				7					
10 / 5439.1			72		2 - 4 - 4				17	24	21	46		
							Boring Depth: 10.5 ft, *Elevation: 5438.6 ft*	10.5 / 5438.6						

Water Level Observations		Remarks
After Drilling: Not Encountered, Augers In	During Drilling: Not Encountered	Remarks: Water not encountered to a dry cave-in depth of 3½' immediately after withdrawal of auger.
	After Drilling: Not Encountered, Augers Out	

(2) MDT LOG OF BORING - MDT_REVISED_2009+(CPT_IMPORT).GDT - 10/13/21 08:38 - Z:\GINT\GINT\PROJECTS\4001-50004029.GPJ

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LOG OF BORING

Boring 8932000-ST-2

Project: Granite Creek - 3 M NW Virginia City		**Rig:** CME 75HT **Hammer:** Auto	**Boring Location** N: 401743.8 ft **Coordinates** E: 1326034.0 ft	**Station:** 142 + 31 **Offset:** 43 ft L
Project Number: 21-4029S	**UPN:** 8932000	**Boring Diameter:** 9"	**System:** MT S.P. (E) **Datum:** NAD83	**Top of Boring Elevation:** 5424.4 ft
Date Started: 7/28/21	**Date Finished:** 7/28/21	**Drilling Fluid:** None	**Location Source:** GWE Survey	**Elevation Source:** GWE Survey
Driller: E. Hollibaugh **Logger:** C. Hopkins		**Abandonment Method:** Backfilled with Cuttings	**Township, Range, and Section:** 6S 3W 8 - CDA	

Depth (ft) / Elev. (ft)	Operation	Sample Type	Recovery (%)	RQD (%)	Blow Count	Lithology	Material Description	Depth (ft) / Elev. (ft)	MC (%)	LL	PL	-200 (%)	DD (pcf)	Remarks and Other Tests
							0-8" Existing Asphalt Pavement.	0.7	3	19	18	10		
			72		1 - 3 - 5		BASE COURSE, Poorly-Graded SAND with silt and gravel (SP-SM), loose, brown, moist, fine to coarse grained, subangular to subrounded, [A-1].	5423.7 1.2 5423.2	10 9	24	15	26	
			61		3 - 2 - 1		FILL, Clayey SAND with gravel (SC), loose, blackish brown, moist, fine to coarse grained, subangular to subrounded, [A-2].	3.5 5420.9	16					Bulk Bag: 2'-3½' MDD: 129.8 pcf OMC: 8.5%
5 5419.4			56		1 - 2 - 2		Silty SAND with gravel (SM), very loose, gray to brown, moist, medium grained, [A-2]. (Alluvium).	5.5 5418.9	8					
			100		WH - WH - 2		Lean CLAY with sand (CL), soft, gray, wet, [A-6]. (Alluvium).		25					Pen: ½ tsf
10 5414.4			66		12 - 21 - 31		Clayey GRAVEL with sand (GC), very dense, yellow brown, waterbearing, fine to coarse grained, [A-2]. (Alluvium).	8.5 5415.9						
							Boring Depth: 10.5 ft, *Elevation: 5413.9 ft*	10.5 5413.9						

Water Level Observations

- During Drilling: 5.0 ft *(5419.4 ft)*
- After Drilling: 5.0 ft *(5419.4 ft), Augers In*
- After Drilling: 4.5 ft *(5419.9 ft), Augers Out*

Remarks:

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LOG OF BORING

Boring 8932000-ST-3

Project: Granite Creek - 3 M NW Virginia City		**Rig:** CME 75HT **Hammer:** Auto	**Boring Location** N: 402584.8 ft **Coordinates** E: 1323960.1 ft	**Station:** 119 + 89 **Offset:** 7 ft L
Project Number: 21-4029S	**UPN:** 8932000	**Boring Diameter:** 9"	**System:** MT S.P. (E) **Datum:** NAD83	**Top of Boring Elevation:** 5407.4 ft
Date Started: 7/28/21	**Date Finished:** 7/28/21	**Drilling Fluid:** None	**Location Source:** GWE Survey	**Elevation Source:** GWE Survey
Driller: E. Hollibaugh **Logger:** C. Hopkins		**Abandonment Method:** Backfilled with Cuttings	**Township, Range, and Section:** 6S 3W 8 - CAA	

Depth (ft) / Elev. (ft)	Operation	Sample Type	Recovery (%)	RQD (%)	Blow Count	Lithology	Material Description	Depth (ft) / Elev. (ft)	MC (%)	LL	PL	-200 (%)	DD (pcf)	Remarks and Other Tests
							0-4½" Existing Asphalt Pavement.	0.4 *5407.0*	2		NP	7		
			83		15 - 14 - 12		BASE COURSE, Silty SAND with gravel (SP-SM), medium dense, brown, moist, fine to coarse grained, subangular, [A-1].	1.5 *5405.9*	4	19	13	22		Bulk Bag: 1½'-3' MDD: 134.8 pcf OMC: 7.9%
			61		8 - 11 - 28		FILL, Poorly-Graded SAND with silt and gravel (SP-SM), medium dense to dense, gray to brown, moist, fine to coarse grained, subangular to subrounded, [A-1].	3.5 *5403.9*	4 3					
5 *5402.4*			56		10 - 15 - 6		FILL, Poorly-Graded GRAVEL with sand (GP), loose to medium dense, brown, moist, fine to coarse grained, subangular to subrounded, [A-1].		3					
			83		3 - 1 - 1		Silty SAND (SM), very loose, dark gray, moist, medium grained, subangular, [A-4]. Some gravels. (Alluvium).	7.0 *5400.4*	30					
10 *5397.4*			72		5 - 6 - 8		Silty GRAVEL with sand (GM), medium dense, gray, moist to wet, fine to coarse grained, subangular to subrounded, [A-1]. (Alluvium).	8.5 *5398.9* 10.5 *5396.9*						

Boring Depth: 10.5 ft, *Elevation: 5396.9 ft*

Water Level Observations	
After Drilling: **9.5 ft** ***(5397.9 ft), Augers In***	During Drilling: **Not Encountered**
	After Drilling: **Not Encountered, Augers Out**

Remarks: Water not encountered to a dry cave-in depth of 3½' immediately after withdrawal of auger.

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LOG OF BORING

Boring 8932000-ST-4

Project: Granite Creek - 3 M NW Virginia City		**Rig:** CME 75HT **Hammer:** Auto	**Boring Location** N: 402167.6 ft **Coordinates** E: 1325284.2 ft	**Station:** 133 + 76 **Offset:** 38 ft L
Project Number: 21-4029S	**UPN:** 8932000	**Boring Diameter:** 4¼"	**System:** MT S.P. (E) **Datum:** NAD83	**Top of Boring Elevation:** 5418.9 ft
Date Started: 7/28/21	**Date Finished:** 7/28/21	**Drilling Fluid:** Bentonite	**Location Source:** GWE Survey	**Elevation Source:** GWE Survey
Driller: E. Hollibaugh **Logger:** C. Hopkins		**Abandonment Method:** Backfilled with Cuttings	**Township, Range, and Section:** 6S 3W 8 - CBD	

Depth (ft) / Elev. (ft)	Operation	Sample Type	Recovery (%)	RQD (%)	Blow Count	Lithology	Material Description	Depth (ft) / Elev. (ft)	MC (%)	LL	PL	-200 (%)	DD (pcf)	Remarks and Other Tests
							0-8½" Existing Asphalt Pavement.	0.7	4		NP	10		
			67		4 - 4 - 6		BASE COURSE, Silty SAND with gravel (SM), loose, brown, moist, fine to coarse grained, subangular to subrounded, [A-2].	*5418.2* 1.5	6					
			56		3 - 2 - 2		FILL, Clayey SAND with gravel (SC), loose to very loose, brown, moist, fine to coarse grained, subangular to subrounded, [A-2].	*5417.4*	7 12 8	22	14	26		Bulk Bag: 2'-4' MDD: 132.8 pcf OMC: 8.2%
5 *5413.9*			33		2 - 2 - 1									
							Silty SAND with gravel (SM), very loose, gray, moist to wet, fine to coarse grained, subangular to subrounded, [A-2]. (Alluvium).	5.5 *5413.4*	14					
			22		1 - 2 - 1									
							Silty SAND (SM), loose, dark gray, wet, fine to coarse grained, subangular to subrounded, [A-2]. (Alluvium).	8.5 *5410.4*	45					
10 *5408.9*			78		1 - 2 - 3									
							Silty GRAVEL with sand (GM), medium dense, gray, wet, fine to coarse grained, subangular to subrounded, [A-1]. (Alluvium).	10.5 *5408.4*						
			67		7 - 11 - 14									
15 *5403.9*			89		27 - 29 - 49		Clayey GRAVEL with sand and cobbles (GC), very dense, yellowish brown, wet, fine to coarse grained, subangular to subrounded, [A-2]. (Alluvium).	14.0 *5404.9*						
20 *5398.9*			100		28 - 41 - 50									
							GNEISS, yellowish brown, coarse grained, moderately hard to hard field hardness.	23.0 *5395.9*						
25 *5393.9*			100		50/0.4ft									
			57		28 - 50/0.4ft			29.9 *5389.0*						

Boring Depth: 29.9 ft, *Elevation: 5389.0 ft*

(2) MDT LOG OF BORING - MDT_REVISED_2009+(CPT_IMPORT).GDT - 10/13/21 08:39 - Z:\GINT\GINT\PROJECTS\4001-50004029.GPJ

Water Level Observations

- During Drilling: **8.0 ft** ***(5410.9 ft)***
- After Drilling: **7.5 ft** ***(5411.4 ft), Augers In***
- After Drilling: **Not Encountered, Augers Out**

Remarks: Water not encountered to a dry cave-in depth of 5½' immediately after withdrawal of auger.

SK GEOTECHNICAL

LOG OF BORING

Boring 8932000-ST-101

Project: Granite Creek - 3 M NW Virginia City		**Rig:** CME 75HT **Hammer:** Auto	**Boring Location** N: 402059.7 ft **Coordinates** E: 1325473.0 ft	**Station:** 135 + 92 **Offset:** 25 ft L
Project Number: 21-4029S	**UPN:** 8932000	**Boring Diameter:** 4¼"	**System:** MT S.P. (E) **Datum:** NAD83	**Top of Boring Elevation:** 5419.5 ft
Date Started: 7/26/21	**Date Finished:** 7/27/21	**Drilling Fluid:** Water	**Location Source:** GWE Survey	**Elevation Source:** GWE Survey
Driller: E. Hollibaugh **Logger:** C. Hopkins		**Abandonment Method:** Backfilled with Cuttings	**Township, Range, and Section:** 6S 3W 8 - CAC	

Depth (ft) / Elev. (ft)	Operation	Sample Type	Recovery (%)	RQD (%)	Blow Count	Lithology	Material Description	Depth (ft) / Elev. (ft)	MC (%)	LL	PL	-200 (%)	DD (pcf)	Remarks and Other Tests
							0-2¼" Existing Asphalt Pavement.	0.2 *5419.3*						
			100		2 - 8 - 17		BASE COURSE, Poorly-Graded GRAVEL with sand (GP), dense, reddish brown, moist, fine to coarse grained, subangular to subrounded, [A-1].	0.5 *5419.0*	5					
			56		9 - 10 - 16		FILL, Sandy Lean CLAY with gravel (CL), stiff, brown, moist, [A-6].	1.8 *5417.7*	5					
5 *5414.5*			83		1 - 3 - 2		FILL, Poorly-Graded SAND with silt and gravel (SP-SM), medium dense, brown, moist, fine to coarse grained, subangular to subrounded, [A-2].	3.5 *5416.0*	21					
			100				Sandy Lean CLAY (CL), medium stiff, gray to dark gray, wet, [A-4]. (Alluvium).	6.0 *5413.5*	19 26	27 22	17 21	50 21		
			100		WH - WH - WH		Silty SAND (SM), very loose, gray, wet, fine grained, subangular, [A-2]. Some organics and seams of clay. (Alluvium).	8.5 *5411.0*	37					
10 *5409.5*			72		21 - 25 - 26		Silty GRAVEL with sand and cobbles (GM), dense to very dense, gray with red, wet, fine to coarse grained, subangular to subrounded, [A-1]. (Alluvium).				NP	9		
			61		24 - 21 - 24									
15 *5404.5*			72		18 - 31 - 23									
20 *5399.5*			61		15 - 17 - 21		Silty SAND (SM), dense, dark gray, wet, medium grained, subangular, [A-2]. Slighlty cemented. (Alluvium).	19.0 *5400.5*						
25 *5394.5*			95		21 - 50/0.4ft		GNEISS, dark gray with brown, coarse grained, soft to medium field hardness.	23.0 *5396.5*						
30			100		50/0.4ft									
5389.5														

Water Level Observations

- During Drilling: **5.0 ft** ***(5414.5 ft)***
- After Drilling: **Not Encountered, Augers In**
- After Drilling: **4.0 ft** ***(5415.5 ft), Augers Out***

Remarks:

(2) MDT LOG OF BORING - MDT_REVISED_2009+(CPT_IMPORT).GDT - 10/13/21 08:38 - Z:\GINT\GINT\PROJECTS\4001-5000\4029.GPJ

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LOG OF BORING

Boring 8932000-ST-101

Project: Granite Creek - 3 M NW Virginia City		**Rig:** CME 75HT **Hammer:** Auto	**Boring Location** N: 402059.7 ft **Coordinates** E: 1325473.0 ft	**Station:** 135 + 92 **Offset:** 25 ft L
Project Number: 21-4029S	**UPN:** 8932000	**Boring Diameter:** 4¼"	**System:** MT S.P. (E) **Datum:** NAD83	**Top of Boring Elevation:** 5419.5 ft
Date Started: 7/26/21	**Date Finished:** 7/27/21	**Drilling Fluid:** Water	**Location Source:** GWE Survey	**Elevation Source:** GWE Survey
Driller: E. Hollibaugh **Logger:** C. Hopkins		**Abandonment Method:** Backfilled with Cuttings	**Township, Range, and Section:** 6S 3W 8 - CAC	

Depth (ft) Elev. (ft)	Operation	Sample Type	Recovery (%)	RQD (%)	Blow Count	Lithology	Material Description	Depth (ft) Elev. (ft)	MC (%)	LL	PL	-200 (%)	DD (pcf)	Remarks and Other Tests
							Gneiss Continued...							
35 5384.5			100		50/0.3ft		GNEISS, gray mottled black and white, fine grained, medium bedded, moderately hard to very hard field hardness. Moderately to slightly weathered. Intensely fractured.	35.0 5384.5						
40 5379.5			100		50/0.2ft									
			100	0										
			97	21										
45 5374.5			42	0										
			95	0										
50 5369.5			100	0										
			100	9										
55 5364.5			100	0										
			100	42									175	UCS: 5,425 psi
60 5359.5														

(2) MDT LOG OF BORING - MDT_REVISED_2009+(CPT_IMPORT).GDT - 10/13/21 08:38 - Z:\GINT\GINT\PROJECTS\4001-5000\4029.GPJ

Water Level Observations	
▽ After Drilling: Not Encountered, Augers In	▽ During Drilling: 5.0 ft *(5414.5 ft)* ▼ After Drilling: 4.0 ft *(5415.5 ft), Augers Out*

Remarks:

SK GEOTECHNICAL

LOG OF BORING

Boring 8932000-ST-101

Project: Granite Creek - 3 M NW Virginia City		**Rig:** CME 75HT **Hammer:** Auto	**Boring Location** N: 402059.7 ft **Coordinates** E: 1325473.0 ft	**Station:** 135 + 92 **Offset:** 25 ft L
Project Number: 21-4029S	**UPN:** 8932000	**Boring Diameter:** 4¼"	**System:** MT S.P. (E) **Datum:** NAD83	**Top of Boring Elevation:** 5419.5 ft
Date Started: 7/26/21	**Date Finished:** 7/27/21	**Drilling Fluid:** Water	**Location Source:** GWE Survey	**Elevation Source:** GWE Survey
Driller: E. Hollibaugh **Logger:** C. Hopkins		**Abandonment Method:** Backfilled with Cuttings	**Township, Range, and Section:** 6S 3W 8 - CAC	

Depth (ft) Elev. (ft)	Operation	Sample Type	Recovery (%)	RQD (%)	Blow Count	Lithology	Material Description	Depth (ft) Elev. (ft)	MC (%)	LL	PL	-200 (%)	DD (pcf)	Remarks and Other Tests
							Gneiss Continued...						190	UCS: 2,934 psi
							Boring Depth: 61.6 ft, *Elevation: 5357.9 ft*	61.6 *5357.9*						

Water Level Observations

- After Drilling: **Not Encountered, Augers In**
- During Drilling: **5.0 ft** ***(5414.5 ft)***
- After Drilling: **4.0 ft** ***(5415.5 ft), Augers Out***

Remarks:

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LOG OF BORING

Boring 8932000-ST-102

Project: Granite Creek - 3 M NW Virginia City		**Rig:** CME 75HT **Hammer:** Auto	**Boring Location** N: 402103.8 ft **Coordinates** E: 1325418.0 ft	**Station:** 135 + 23 **Offset:** 39 ft L
Project Number: 21-4029S	**UPN:** 8932000	**Boring Diameter:** 9"	**System:** MT S.P. (E) **Datum:** NAD83	**Top of Boring Elevation:** 5419.8 ft
Date Started: 7/29/21	**Date Finished:** 7/29/21	**Drilling Fluid:** None	**Location Source:** GWE Survey	**Elevation Source:** GWE Survey
Driller: E. Hollibaugh **Logger:** C. Hopkins		**Abandonment Method:** Backfilled with Cuttings	**Township, Range, and Section:** 6S 3W 8 - CAC	

Depth (ft) / Elev. (ft)	Operation	Sample Type	Recovery (%)	RQD (%)	Blow Count	Lithology	Material Description	Depth (ft) / Elev. (ft)	MC (%)	LL	PL	-200 (%)	DD (pcf)	Remarks and Other Tests
							0-8" Existing Asphalt Pavement.	0.7						
							BASE COURSE, Poorly-Graded GRAVEL with sand (GP), medium dense, brown, moist, fine to coarse grained, subangular to subrounded, [A-1].	5419.1 1.4 5418.4	2 9		NP	6		
			78		1 - 6 - 4				3	25	14	18		Bulk Bag: 1½'-3½'
			67		8 - 18 - 15		FILL, Poorly-Graded SAND with silt and gravel (SP-SM), loose, brown, moist, fine to coarse grained, subangular, [A-1].	3.0 5416.8	1					
5 5414.8			6		7 - 4 - 3		FILL, Poorly-Graded GRAVEL with sand (GP), dense, light brown, moist, fine to coarse grained, subangular to subrounded, [A-1].	4.5 5415.3	5					
			50						8	16	15	21		
			83		2 - 2 - 2		Silty SAND (SM), loose, gray to black, moist to wet, fine to coarse grained, [A-4]. (Alluvium).		29	22	21	43		
			67						16		NP	39		
10 5409.8			44		3 - 13 - 28		Poorly-Graded GRAVEL with silt, sand, cobbles, and boulders (GP-GM), medium dense to very dense, gray, wet, fine to coarse grained, subangular to subrounded, [A-1]. (Alluvium).	9.5 5410.3	12					
			67		25 - 23 - 28									Added drilling mud at 11½' to control sand heave.
15 5404.8			83		17 - 48 - 50									
			61		2 - 2 - 11		Silty SAND (SM), medium dense, orange, wet, fine to coarse grained, subangular to subrounded, [A-2]. (Alluvium).	18.5 5401.3 19.5 5400.3						Auger Refusal at 18'. ST-102 moved 6' southeast to continue on ST-102A.

Boring Depth: 19.5 ft, *Elevation: 5400.3 ft*

Water Level Observations		
▽ After Drilling: *(), Augers In*	▽ During Drilling: **9.5 ft** ***(5410.3 ft)***	Remarks: Water not encountered to a dry cave-in depth of 2½' immediately after withdrawal of auger.
	▼ After Drilling: **Not Encountered, Augers Out**	

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LOG OF BORING

Boring 8932000-ST-102A

Project: Granite Creek - 3 M NW Virginia City		**Rig:** CME 75HT **Hammer:** Auto	**Boring Location** N: 402100.3 ft **Coordinates** E: 1325424.4 ft	**Station:** 135 + 30 **Offset:** 39 ft L
Project Number: 21-4029S	**UPN:** 8932000	**Boring Diameter:** 9"	**System:** MT S.P. (E) **Datum:** NAD83	**Top of Boring Elevation:** 5419.9 ft
Date Started: 8/3/21	**Date Finished:** 8/4/21	**Drilling Fluid:** Water	**Location Source:** GWE Survey	**Elevation Source:** GWE Survey
Driller: E. Hollibaugh **Logger:** C. Hopkins		**Abandonment Method:** Backfilled with Cuttings	**Township, Range, and Section:** 6S 3W 8 - CAC	

Depth (ft) Elev. (ft)	Operation	Sample Type	Recovery (%)	RQD (%)	Blow Count	Lithology	Material Description	Depth (ft) Elev. (ft)	MC (%)	LL	PL	-200 (%)	DD (pcf)	Remarks and Other Tests
							Existing Asphalt Pavement.	0.7						
							BASE COURSE, [A-1].	5419.2						See Boring ST-102 for more detailed soil layer data from 0'-19½'.
							FILL, Poorly-Graded SAND with silt and gravel, (SP-SM). [A-1]. (Alluvium).	1.4 5418.5						
							FILL, Poorly-Graded GRAVEL with sand (GP). [A-1]. (Alluvium).	3.0 5416.9						
5 5414.9							Silty SAND, (SM). [A-4]. (Alluvium). ▼	4.5 5415.4						
							▽ Poorly-Graded GRAVEL with silt, sand, cobbles, and boulders (GP-GM). [A-1]. (Alluvium).	9.5 5410.4						Added drilling mud at 10' to reduce sand heave.
10 5409.9														
15 5404.9														
20 5399.9							Silty SAND, (SM). [A-2]. (Alluvium).	18.5 5401.4						
25 5394.9			67		5 - 9 - 12		Silty SAND with gravel (SM), medium dense, reddish brown, wet, fine to coarse grained, subangular, [A-2]. FeOX Staining. (Alluvium).	24.0 5395.9						
30 5389.9			100		47 - 49 - 50			29.5						

Water Level Observations

▽ During Drilling: **9.5 ft** ***(5410.4 ft)***

▼ After Drilling: ***(), Augers In***

▼ After Drilling: **5.0 ft** ***(5414.9 ft), Augers Out***

Remarks: Water encountered to wet cave-in depth of 32½' immediately after withdrawal of auger.

(2) MDT LOG OF BORING - MDT_REVISED_2009+(CPT_IMPORT).GDT - 10/13/21 08:39 - Z:\GINT\GINT\PROJECTS\4001-5000\4029.GPJ

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LOG OF BORING

Boring 8932000-ST-102A

Project: Granite Creek - 3 M NW Virginia City		**Rig:** CME 75HT **Hammer:** Auto	**Boring Location** N: 402100.3 ft **Coordinates** E: 1325424.4 ft	**Station:** 135 + 30 **Offset:** 39 ft L
Project Number: 21-4029S	**UPN:** 8932000	**Boring Diameter:** 9"	**System:** MT S.P. (E) **Datum:** NAD83	**Top of Boring Elevation:** 5419.9 ft
Date Started: 8/3/21	**Date Finished:** 8/4/21	**Drilling Fluid:** Water	**Location Source:** GWE Survey	**Elevation Source:** GWE Survey
Driller: E. Hollibaugh **Logger:** C. Hopkins		**Abandonment Method:** Backfilled with Cuttings	**Township, Range, and Section:** 6S 3W 8 - CAC	

Depth (ft) / Elev. (ft)	Operation	Sample Type	Recovery (%)	RQD (%)	Blow Count	Lithology	Material Description	Depth (ft) / Elev. (ft)	MC (%)	LL	PL	-200 (%)	DD (pcf)	Remarks and Other Tests
							GNEISS, red to brown, coarse grained, very soft to soft field hardness.	5390.4						
35 5384.9			100		50/0.5ft									
40 5379.9			94		15 - 20 - 47									
45 5374.9			100		50/0.3ft		GNEISS, red to brown, coarse grained, very thickly bedded, moderately hard to hard field hardness. Moderately to Highly Weathered. Intensely Fractured.	44.0 5375.9						
50 5369.9			80		50/0.5ft									
55 5364.9			100		50/0.5ft									
			0	0										
60			40	0										
5359.9														

Water Level Observations

During Drilling: 9.5 ft *(5410.4 ft)*

After Drilling: *(), Augers In*

After Drilling: 5.0 ft *(5414.9 ft), Augers Out*

Remarks: Water encountered to wet cave-in depth of 32½' immediately after withdrawal of auger.

(2) MDT LOG OF BORING - MDT_REVISED_2009+(CPT_IMPORT).GDT - 10/13/21 08:39 - Z:\GINT\GINT\PROJECTS\4001-5000\4029.GPJ

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LOG OF BORING

Boring 8932000-ST-102A

Project: Granite Creek - 3 M NW Virginia City		**Rig:** CME 75HT **Hammer:** Auto	**Boring Location** N: 402100.3 ft **Coordinates** E: 1325424.4 ft	**Station:** 135 + 30 **Offset:** 39 ft L
Project Number: 21-4029S	**UPN:** 8932000	**Boring Diameter:** 9"	**System:** MT S.P. (E) **Datum:** NAD83	**Top of Boring Elevation:** 5419.9 ft
Date Started: 8/3/21	**Date Finished:** 8/4/21	**Drilling Fluid:** Water	**Location Source:** GWE Survey	**Elevation Source:** GWE Survey
Driller: E. Hollibaugh **Logger:** C. Hopkins		**Abandonment Method:** Backfilled with Cuttings	**Township, Range, and Section:** 6S 3W 8 - CAC	

Depth (ft) Elev. (ft)	Operation	Sample Type	Recovery (%)	RQD (%)	Blow Count	Lithology	Material Description	Depth (ft) Elev. (ft)	MC (%)	LL	PL	-200 (%)	DD (pcf)	Remarks and Other Tests
							Gneiss Continued...							
65 5354.9			62	20										
70 5349.9			78	15										
75 5344.9			85	10									161	UCS: 8,447 psi
							GRANITE, gray, coarse grained, very thickly bedded, moderately hard to hard field hardness. Moderately Weathered. Intensely Fractured.	75.0 5344.9						
80 5339.9			91	0									151	UCS: 601 psi
85 5334.9			90	0										
							Boring Depth: 85.7 ft, *Elevation: 5334.2 ft*	85.7 5334.2						

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Water Level Observations

- During Drilling: **9.5 ft** ***(5410.4 ft)***
- After Drilling: ***(), Augers In***
- After Drilling: **5.0 ft** ***(5414.9 ft), Augers Out***

Remarks: Water encountered to wet cave-in depth of 32½' immediately after withdrawal of auger.

SK GEOTECHNICAL
2511 Holman Avenue
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Billings, MT 59108-0190
Phone: 406.652.3930
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LOG OF TEST PIT

PROJECT: 21-4029S **SOIL SURVEY** Granite Creek - 3 M NW Virginia City Madison County, Montana	TEST PIT: **TP-1** LOCATION: 151+50; 54' L of CL See Attached Sketch
LOGGED BY: D. Hutzenbiler / METHOD: Backhoe	DATE: 3/14/22 / SCALE: 1" = 2'

Elev.	Depth	Symbol	Description of Materials	B*	WL	qp	Remarks
5452.0	0.0						
5451.5	0.5		Topsoil: (5")	21			*Dynamic cone penetrometer test results.
		SM	SILTY SAND with GRAVEL, fine- to coarse-grained, brown, moist, medium dense to dense, subrounded to subangular. (Alluvium)	25 36 31 52 37 50-5" 50-4"			
5448.0	4.0						
		SM	SILTY SAND, fine- to coarse-grained, some gravels, brown, moist, medium dense, subrounded to subangular. (Alluvium)	27 25 23 24			
5446.0	6.0						
		SM	SILTY SAND with GRAVEL, fine- to coarse-grained, brown, moist, medium dense to dense, subrounded to subangular. (Alluvium)	27 50-5" 35 38			
5444.0	8.0						
		SP SM	POORLY GRADED SAND with SILT and GRAVEL, fine- to coarse-grained, trace cobbles, light brown to brown, moist, subrounded to subangular. (Alluvium)	37 16 19 33			Bulk Subgrade Sample: 8'-10'
5442.0	10.0						
		SM	SILTY SAND, medium-grained, trace gravels, brown, moist, medium dense. (Alluvium)				Thinwall Sample: 10'-11'
5441.0	11.0						
			END OF TEST PIT Water not observed in excavation. Test pit then backfilled.				

TEST PIT B* WL QP 4029 LAB.GPJ LAGNNN06.GDT 5/2/22

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LOG OF TEST PIT

PROJECT: 21-4029S **SOIL SURVEY** Granite Creek - 3 M NW Virginia City Madison County, Montana	TEST PIT: **TP-2** LOCATION: 152+07; 43' L of CL See Attached Sketch
LOGGED BY: D. Hutzenbiler / METHOD: Backhoe	DATE: 3/14/22 / SCALE: 1" = 2'

Elev.	Depth	Symbol	Description of Materials	B	WL	qp	Remarks
5451.0	0.0						
5450.4	0.6		Topsoil: (7")				
5449.5	1.5	SM	SILTY SAND, fine- to coarse-grained, some gravels and cobbles, trace pinholes, brown, moist, subrounded to angular. (Alluvium)				
5448.5	2.5	SM	SILTY SAND, fine- to coarse-grained, trace pinholes, some gravels, light brown, moist, subrounded to angular. (Alluvium)				
5444.5	6.5	SM	SILTY SAND with GRAVEL, fine- to coarse-grained, light brown, moist, subangular to angular. (Alluvium)				
5443.0	8.0	SM	SILTY SAND, medium-grained, trace gravels, brown, moist, subangular to angular. (Alluvium)				Bulk Bag Sample: 6½'-7½'
			END OF TEST PIT Water not observed in excavation. Test pit then backfilled.				

TEST PIT B WL QP 4029 LAB.GPJ LAGNN06.GDT 5/2/22

AWARD COPY

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LOG OF TEST PIT

PROJECT: 21-4029S **SOIL SURVEY** Granite Creek - 3 M NW Virginia City Madison County, Montana	TEST PIT: **TP-3** LOCATION: 13+35; 25' L of CL See Attached Sketch
LOGGED BY: D. Hutzenbiler / METHOD: Backhoe	DATE: 3/15/22 / SCALE: 1" = 2'

Elev.	Depth	Symbol	Description of Materials	B	WL	qp	Remarks
	0.0						
	0.3		Topsoil: (4")				
		SM	SILTY SAND with GRAVEL, trace roots, fine- to coarse-grained, brown, moist to partially frozen, subrounded to subangular. (Alluvium)				
	2.5						
	3.0	SM	SILTY SAND with GRAVEL, fine- to coarse-grained, some very fine roots, few pinholes, brown, moist, subrounded to subangular. (Alluvium)				Gallon Bag Sample: 2½'-3'
		SP SM	POORLY GRADED SAND with SILT and GRAVEL, fine- to coarse-grained, light brown, moist, subangular to angular. (Alluvium)				
	4.5	SM	SILTY SAND, medium-grained, some smaller gravels, light brown, moist. (Alluvium)				
	5.5		END OF TEST PIT Water not observed in excavation. Test pit then backfilled.				Gallon Bag Sample: 5'-5½'

TEST PIT B WL QP 4029 LAB.GPJ LAGNN06.GDT 5/2/22

STANDARD PROVISIONS INDEX

FEDERAL AID PROJECTS CONTAINS

Federal Wage Rates (Rev. 6-3-2022)..... 6 Pages

Requirements & Acknowledgement for Working on Railroad R/W ..... 1 Page

Required Contract Provisions Federal-Aid Const. Contracts (FORM FHWA-1273) [Rev.7-5-2022]..... 13 Pages

Supplemental Revisions for Required Contract Provisions Federal-Aid Const. Contracts (FORM FHWA-1273) [Added 2-4-2016] ..... 1 Page

EEO Affirmative Action Req. on Federal-Aid Construction ..... 1 Page

"General Decision Number: MT20220080 06/03/2022

State: Montana

Construction Type: Highway

Counties: Montana Statewide.

HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least $15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2022.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least $11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours performing on that contract in 2022.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at https://www.dol.gov/agencies/whd/government-contracts.

Modification Number	Publication Date
0	06/03/2022

SUMT2022-001 04/01/2022

	Rates	Fringes
CARPENTER		
Carpenter/Piledriverman	$ 35.00	13.82
Millwright	$ 39.68	14.27
CEMENT MASON/CONCRETE FINISHER	$ 32.44	16.03
DIVER		
Diver Tender	$ 43.98	17.84
Diving	$ 89.96	17.84
Stand-By	$ 44.98	17.84

The tender shall receive 2 hours at the straight time pay rate per shift for dressing and/or undressing when work is done under hyperbaric conditions.

Depth Pay (Surface Diving):

0-20 ft.: Free zone

>20-100 ft.: $2.00 per ft.

>100-150 ft.: $3.00 per ft.

>150-220 ft.: $4 00 per ft.

>220 ft.: $5.00 per ft.

Diving in Enclosures (Diver Only):

0-25 ft.: Free zone

>25-300 ft.: $1.00 per ft.

ELECTRICIAN (LINE CONSTRUCTION)		
Equipment Operator	$ 37.26	18.06
Groundman	$ 29.09	17.13
Lineman	$ 48.65	19.30
ELECTRICIAN		
All Areas	$ 37.94	19.42
IRONWORKER	$ 29.54	24.49

LABORER

Group 1.....	$ 26.90	12.00
Group 2.....	$ 29.97	12.00
Group 3.....	$ 30.19	12.00
Group 4.....	$ 31.18	12.00

Group 1: Flag Person

Group 2: All General Labor work; Burning Bar; Bucket Man; Carpenter Tender; Caisson Worker; Cement Mason Tender; Cement Handler (dry); Chuck Tender; Choker Setter; Concrete Worker; Curb Machine-Lay Down; Crusher and Batch Plant Worker; Fence Erector; Form Setter; Form Stripper; Heater Tender; Landscaper; Pipe Wrapper; Pot Tender; Powderman Tender; Rail and Truck Loaders and Unloaders; Riprapper; Sealants for Concrete and other materials; Sign Erection, Guard Rail and Jersey Rail; Stake Jumper; Spike Driver; Signalman; Tail Hoseman; Tool Checker and Houseman; Traffic Control Worker

Group 3: Concrete Vibrator; Dumpman (Grademan); Equipment Handler; Geotextile and Liners; High-Pressure Nozzleman; Jackhammer (Pavement Breaker); Laser Equipment; Non-riding Rollers; Pipelayer; Posthole Digger (power); Power Driven Wheelbarrow; Rigger; Sandblaster; Sod-Cutter-power; Tampers

Group 4: Asphalt Raker; Cutting Torch; Grade Setter; High-Scaler; Power Saws (Faller & Concrete); Powderman ($1.00 per hour above Group 4 rate); Rock & Core Drill; Track or Truck Mounted Wagon Drill; Welder including Air Arc

PAINTER (Pavement Marking/Milling and related work. Includes operating marking and all other equipment and all work involved in application of pavement markings including epoxies, paints, tape,buttons, thermo-plastics, and any other products applied for traffic marking purposes and for directing and regulating traffic and cutting rumble strips).....$ 34.95 12.47

POWER EQUIPMENT OPERATOR:

Group 1.....	$ 31.52	12.40
Group 2.....	$ 33.55	12.40
Group 3.....	$ 34.66	12.40
Group 4.....	$ 35.60	12.40
Group 5.....	$ 36.94	12.40
Group 6.....	$ 38.13	12.40
Group 7.....	$ 40.73	12.40

Group 1: Air Compressor; Auto Fine Graders; Belt Finishing Machine; Boring Machine (small); Cement Silo; Crane, A-Frame Truck Crane; Crusher Conveyor; DW-10, 15, and 20 Tractor Roller; Farm Tractor; Forklift; Form Grader; Front End Loader Under 1 CU Yard; Heavy Duty Drills; Herman Nelson Heater; Mulching Machine; Oiler, All Except Cranes & Shovels; Pumpman

Group 2: Air Doctor; Backhoe/Excavator/Shovel to and including 3 CU Yard; Bit Grinder; Bituminous Paving Travel Plant; Boring Machine Large; Broom, Self-Propelled; Concrete Travel Batcher; Concrete Float & Spreader; Concrete Bucket Dispatcher; Concrete Finish Machine; Concrete Conveyor; Distributor; Dozer; Rubber-Tired, Push & Side Boom; Elevating Grader/Gradall; Field Equipment Serviceman; Front End Loader 1 CU Yard to including 5 CU Yard; Grade Setter; Heavy Duty Drills, All Types; Hoist/Tugger, All; Hydralift & Similar; Industrial Locomotive; Motor Patrol, Except Finish; Mountain

Skidder; Oiler - Cranes & Shovels; Pavement Breaker, EMSCO; Power Saw, Self-Propelled; Pugmill; Pumpcrete/Grout Machine; Punch Truck; Roller, Other Than Asphalt; Roller, Sheepsfoot, Self-Propelled; Roller, 25 Tons and Over; Ross Carrier; Rotomill Under 6 Ft; Trenching Machine; Washing/Screening Plant

Group 3: Asphalt Paving Machine; Asphalt Screed; Backhoe/Excavator/Shovel Over 3 CU Yard; Cableway Highline; Concrete Batch Plant; Concrete Curing Machine; Concrete Pump; Cranes; Creter; Cranes, Electric Overhead; Cranes 24 Tons and Under; Curb Machine/Slip Form Paver; Finish Dozer; Front End Loader over 5 CU Yard; Mechanic/Welder; Pioneer Dozer; Roller Asphalt (Breakdown & Finish); Rotomill, over 6 FT; Scraper, Single, Twin or Pulling Belly Dump; Yo-Yo Cat

Group 4: Asphalt/Hot Plant Operator, Cranes, 25 Tons to 44 Tons; Crusher Operator; Finish Motor Patrol; Finish Scraper

Group 5: Cranes, 45 Tons to Including 74 Tons

Group 6: Cranes, 75 Tons to Including 149 Tons; Crane, Whirley (All)

Group 7: Cranes, 150 Tons to Including 250 Tons (Add $ 1.00 For Every 100 Tons Over 250 Tons; Crane, Tower (All)

TRUCK DRIVER

Group 1.....	$ 27.39	12.20
Group 2.....	$ 34.70	12.20

Group 1: Pilot Car

Group 2: Combination Truck and Concrete Mixer and Transit Mixer; Dry Batch Trucks; Distributor Driver; Dumpman; Dump Trucks and Similar Equipment; Dumpster; Flat Trucks; Lumber Carriers; Lowboys; Pickup; Powder Truck Driver; Power Boom; Serviceman; Service Truck/Fuel Truck/ Tireperson; Truck Mechanic; Trucks with Power Equipment; Warehouseman, Partsman, Cardex and Warehouse Expeditor; Water Trucks

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at: https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four-letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1,2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union

average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can

be:

* an existing published wage determination

* a survey underlying a wage determination

* a Wage and Hour Division letter setting forth a position on a wage determination matter

* a conformance (additional classification and rate) ruling On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in

2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations.

Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7).

Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board).

Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

Effective 09-08-22

"CONTRACTOR REQUIREMENTS AND ACKNOWLEDGMENT FOR WORKING ON RAILROAD RIGHT-OF-WAY"

This document must be dated and signed by the Contractor and submitted to the State before occupying or working on Railroad right-of-way.

1) No change, which has a direct effect on the Railroad, will be made to construction plans without submitting revised plans and receiving approval from the Railroad. Work covered by the plans, that requires flagging, will be covered by the Railroad/Highway Agreement. For work that is a result of the contractor's discretion, flagging protection will be required when equipment crosses or is working within 25 feet (7.62 meters) of center of any live track. When deemed necessary by local Railroad officers, a flagman may be required at all times while working on Railroad right-of-way in high density rail traffic area.

2) Crossing of any Railroad tracks must be done at approved locations and must be full depth timber, rubber, etc. Any equipment with steel wheels, lugs or tracks must not cross steel rails without the use of rubber tires or other approved protection. This shall apply specifically to, but not be limited to, access for Contractor furnished gravel, borrow or waste sites. The Contractor will be required to obtain a permit from the Railroad, and comply with any provisions thereof, before using any private Railroad crossings. All track crossing locations must be covered by a Private Roadway and Crossing Agreement. This does not apply to any public crossing.

3) Costs of flagging or planking protection of the tracks, which are a direct result of the planned construction, will be paid for by the State. Costs of flagging, planking for protection of the tracks, installation of new crossings or other work caused by the Contractor's discretion, will be paid by the Contractor.

4) When work to be performed by the Contractor is not covered in the Railroad/Highway agreement, the Contractor must furnish a plan to the Railroad for approval showing details as to how any work that may affect the Railroad will be accomplished.

5) Storing of construction materials or any other material, including dirt, sand, etc., within the Railroad right-of-way, will not be allowed unless covered by an easement, construction permit, or Contractor's permit/lease.

6) Construction within 25 feet (7.62 meters) of the center of any track not covered by the Railroad/Highway agreement will require plan approval and authorization by the Railroad Superintendent Maintenance and Engineering. This includes, but is not limited to, any excavation, slope work and driving of sheet piling.

7) No vehicles, equipment or machines shall be parked or stored unattended within 25 feet (7.62 meters) of any track, on railroad right-of-way, without specific written approval of the Railroad.

8) When any work is to be performed on Railroad property by the Contractor that is not shown in the construction plans, the Contractor must submit a detailed plan of the work to the Railroad for their approval.

CONTRACTOR'S ACKNOWLEDGMENT:

_____
Company

By: _____
Name

_____
Title

_____
Date

WORK SITE LOCATION:

_____
Town

_____
State

_____
Project #

Rev. 01/01/04

FHWA-1273 -- Revised July 5, 2022

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination
III. Non-segregated Facilities
IV. Davis-Bacon and Related Act Provisions
V. Contract Work Hours and Safety Standards Act Provisions
VI. Subletting or Assigning the Contract
VII. Safety: Accident Prevention
VIII. False Statements Concerning Highway Projects
IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
XI. Certification Regarding Use of Contract Funds for Lobbying
XII. Use of United States-Flag Vessels:

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (*see* 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:
(1) Withholding monthly progress payments;
(2) Assessing sanctions;
(3) Liquidated damages; and/or
(4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than $10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding (29 CFR 5.5)

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records (29 CFR 5.5)

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency.

(2) Each payroll submitted shall be accompanied by a “Statement of Compliance,” signed by the contractor or

subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees (29 CFR 5.5)

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the

corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility (29 CFR 5.5)

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1 of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph 1 of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1 of this section. 29 CFR 5.5.

* $27 as of January 23, 2019 (See 84 FR 213-01, 218) as may be adjusted annually by the Department of Labor; pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990).

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 2 of this section. 29 CFR 5.5.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs 1 through 4 of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1 through 4 of this section. 29 CFR 5.5.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance

with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of $150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.326.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.326.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant

who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

3. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is

submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(a) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(b) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(c) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier

subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B)
This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

Supplemental Revisions for FHWA Form-1273 (Dated May 1, 2012)
Required Contract Provisions
Federal-Aid Construction Contracts

The following are supplementary or amendatory to the May 1, 2012, FHWA Form-1273 insofar as they apply to this contract:

Add the following provisions in accordance with the FHWA memo dated December 11, 2015:

Utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

Furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in above paragraph to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

SPECIAL PROVISIONS
Rev. 3-15-02
EEO AFFIRMATIVE ACTION REQUIREMENTS ON
FEDERAL & FEDERAL-AID CONSTRUCTION CONTRACTS

Federal-aid contractors are hereby notified they are subject to the OFCCP goals and timetables for minority and female participation expressed below. Compliance with the goals and OFCCP affirmative action efforts for contracts and subcontracts consisting of $10,000 or more will be determined by OFCCP officials.

APPENDIX A

Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)

1. The Offeror's or Bidder's attention is called to the Equal Opportunity Clause and "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

GOALS FOR FEMALE PARTICIPATION EACH TRADE	6.9%
TIMETABLES	GOALS FOR MINORITY PARTICIPATION IN EACH TRADE
153 Great Falls, MT	
SMSA (Standard Metropolitan Statistical Area) Counties	
3040 Great Falls, MT	3.2%
Cascade County	
Non-SMSA Counties	4.1%
Blaine, Broadwater, Chouteau, Fergus, Glacier, Hill, Jefferson, Judith Basin, Lewis & Clark, Liberty, Meagher, Petroleum, Phillips, Pondera, Teton, Toole, Valley, Wheatland	
154 Missoula, MT	
Non-SMSA Counties	2.7%
Beaverhead, Deer Lodge, Flathead, Granite, Lincoln, Madison, Mineral, Lake Missoula, Powell, Ravalli, Sanders, Silver Bow	
155 Billings, MT	
SMSA Counties	
0880 Billings, MT	3.3%
Yellowstone County	
Non-SMSA Counties	3.3%
Big Horn, Carbon, Carter, Custer, Dawson, Fallon, Gallatin, Garfield, Golden Valley, McCone, Musselshell, Park, Powder River, Prairie, Rosebud, Stillwater, Sweet Grass, Treasure, Wibaux, Yellowstone Nat'l Park	
Non-SMSA Counties	
Daniels, Sheridan, Richland, Roosevelt	4.4%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.