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 17, 2020. All bids will then be publicly opened, reviewed for correctness, and then publicly read in the Department's auditorium.

Federal Aid Project(s):

STPB 9048(49) Stillwater River – 2 M NW Absarokee

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 #06B20
AWARDED ON: DECEMBER 29, 2020
TO: SLETTEN CONSTRUCTION COMPANY

MONTANA DEPARTMENT OF TRANSPORTATION

Barb Skelton, Chairperson
Montana Transportation Commission

Michael T. Tooley
Director of Transportation

Contract No.06B20
EM:ST:8670000AWD-202

AWARD COPY

CURRENT QUESTIONS & ANSWERS

202 - STILLWATER RIVER - 2 M NW ABSAROKEE - December 17, 2020

Notifications

No Notices available for this project.

Addendums

-1-

Submitted: Monday 14-DEC-2020 3:58PM

An Addendum has been posted for this project: **ADDENDUM**

To download the addendum bid files, click here: **BID FILES**

Clarifications

-1-

Submitted Thursday 03-DEC-2020 07:20 AM

The attached Fencing Frame on Sheet 10 has been revised to reflect the change to Fence-Wood-3 Rail to 64 lnft and Farm Gate-Metal- Type G-3 to 12 lnft. An Addendum will be issued.

REVISED FENCING SHEET 10

-2-

Submitted: Monday 14-DEC-2020 03:00 PM

Do not use stay-in-place forms for the truss bridge deck.

Questions

-1-

Submitted: Monday 30-NOV-2020 12:01 PM

Company: Frontier West, LLC

Contact: Estimating

Can MDT provide the as-builts for this project?

Answer

Submitted: Tuesday 01-DEC-2020 3:52PM

There are no as-builts for this project.

-2-

Submitted: Tuesday 01-DEC-2020 01:21 PM

Company: Truenorth Steel

Contact: Cory Claussen

Will MDT accept IBR: Certified Bridge Fabricator - Intermediate (Major) with fracture critical endorsement on the Stillwater Project?

Answer

Submitted: Thursday 03-DEC-2020 02:37 PM

If the steel fabricator meets the requirements of Standard Specification 556.03.1, IBR certification would be accepted.

-3-

Submitted: Tuesday 01-DEC-2020 05:03 PM

Company: Forterra

Contact: Brian Jenner

Sheet 17 shows a detail in the lower left corner for the box with cutoff wall and wingwalls. The detail shows the extension length of 11'-3" from each side of the outside of the box culvert. Is this correct? They are normally 3'-0" from the outside edge of the box culvert.

CURRENT QUESTIONS & ANSWERS

Answer
Submitted: Thursday 03-DEC-2020 02:32 PM
Revise the dimension for the cutoff wall on Plan Sheet 17 from 11'-3" to 4'-0".

-4-
Submitted: Wednesday 02-DEC-2020 09:49 AM
Company: Territorial Landworks
Contact: Matt Jacobson
1. Are all digital (CAD) design files available for bridge, retaining walls and road
2. Is MDOT doing the slope staking and are they available to blue top/grade check for you (may not be an issue if machine control is used?)
3. Will they be setting additional control other than what is shown on the plans?
Answer
Submitted: Monday 07-DEC-2020 01:50 PM
1. The requested files do not represent the staked project, but are only design files. The Department cannot guarantee the accuracy of the electronic data, particularly as it may be called up by your computer, nor does any data in these files supersede the data in the contract documents.
In addition, the Department will not make any revisions to the electronic files pertaining to the staked project, change ordered work, or changes that are made during construction to fit field conditions.

The design files for the requested project are posted on the MDT FTP site: **RETAINING WALL, BRIDGE AND ROAD FILES**

2. MDT will slope stake the project. Blue topping is the responsibility of the contractor, grade checks will be performed by MDT according to Standard Specification 105.08.6.
3. No additional control will be set by MDT

-5-
Submitted: Thursday 03-DEC-2020 08:17 AM
Company: Sletten Construction Co.
Contact: Michael Anderson
Special 35 Remove Miscellaneous Items tells us to "relocate the rocks from an existing rock wall to an agreed upon location..." Question: does relocate mean to 1) remove and stockpile the rocks or 2) remove and re-build the wall in a new location?
Answer
Submitted: Monday 07-DEC-2020 12:22 PM
Coordinate with the landowner Roy Clement for the agreed location to relocate the rocks. The intent is to remove and stockpile the rocks.

-6-
Submitted: Friday 04-DEC-2020 03:52 PM
Company: Sletten Construction Co.
Contact: Michael Anderson
Aggregate Treatment - Typical Sections No. 2 and No. 3 call for a total of 649SY of aggregate treatment. Will a bid item be added?
Answer
Submitted: Wednesday 09-DEC-2020 2:16PM
Aggregate Treatment will not be needed on the project, disregard the Aggregate Treatment shown on typicals 2 and 3.
The updated typicals can be found at the following link: **REVISED SHEETS 5 AND 6**

CURRENT QUESTIONS & ANSWERS

-7-
Submitted: Friday 04-DEC-2020 03:56 PM
Company: Sletten Construction Co.
Contact: Michael Anderson
1) The Bid Date of December 17 will only allow 2.5 weeks after award for permit approval prior to NTP – IF we submit permits the day of award. A NTP of January 18 only allows 6 weeks of work before the in-channel work is halted due to the restrictions of Special Provision 23. This time is only usable if the permit review and approval is completed in 2.5 weeks by the Agencies. Sletten's recent experience is closer to 8-9 weeks for permit approval. If permit approvals are not received in 2.5 weeks, then in-channel work cannot begin until July 1 which only allows about 5 weeks to complete all contract work associated with the bridge without LD's. This is also the time of year where this waterway will be experiencing high(er) water as well – a more costly time to be working in the waterway. QUESTION: With the permit approvals estimated at 8-9 weeks we see the following options: a) issue the NTP as advertised then issue a STOP WORK order stopping time assessment until permits are available, b) delay the NTP for this project until March 1, 2021 allowing for more contract time after the July 1 restriction per Special Provision 23 for completion of this project, or 3) add 40 working days to the contract time.
2) Is drilled shaft / cap work considered in-channel work with regard to the Special 23 Stream Protection Act 124 – Timing Restriction?
Answer
Submitted: Thursday 10-DEC-2020 11:34 AM
1) This contract will be changed to a completion date contract with a completion date of November 12th, 2021. Special #2, Contract Time, is hereby replaced with the attached Contract Time-Completion Date special. An Addendum will be issued. **CONTRACT TIME - COMPLETION DATE** The attached special Traffic Control and Sequence of Operations is also hereby part of this Contract. **SEQUENCE OF OPS**
2) The regulatory agencies make the determination on what is considered in-channel work.

-8-
Submitted: Friday 04-DEC-2020 04:28 PM
Company: Sletten Construction Co.
Contact: Michael Anderson
Temporary Fencing - with no location information on the plans, will MDT be furnishing the start and stop points for the temporary fence?
Answer
Submitted: Tuesday 08-DEC-2020 11:28AM
The contractor needs to discuss locations for temporary fencing with the MDT Project Manager for approval. The needs for temporary fencing can vary depending on contractor operations.

-9-
Submitted: Friday 11-DEC-2020 08:47 AM
Company: Contech
Contact: Tim Miller
Per AISC Quality Certification Program which is referenced in MDT section 566.03.1 fabricators must have supplied similar bridges meeting the Advanced Bridge qualification for highways or railroad within the last 5 years. Please confirm this is required for the 155' all bolted truss bridge on this project.
Answer
Submitted: Monday 12-DEC-2020 02:52 PM
The 5 year requirement is for the certification process. Our specifications require that they have the certification prior to performing work. Also, refer to Q&A #2 allowing IBR certified fabricators.

CURRENT QUESTIONS & ANSWERS

-10-
Submitted: Monday 14-DEC-2020 10:00 AM
Company: FirstMark Construction
Contact: Dan Zekonis
There appears to be a quantity error in the Reinforcing Steel bid item. Based off the bills of reinforcing steel provided for the drilled shafts there is approximately 33499LB of reinforcing steel. Please confirm which quantity is correct.
Answer
Submitted: Monday 14-DEC-2020 03:53 PM
There was an error in the reinforcing steel quantities. The updated qty is as follows for Reinforcing Steel (Regular):
Bent 1: 16,396 LB
Bent 2: 25,681 LB
Total: 42,077 LB
The updated plan sheet is attached. **BRIDGE PLAN SHEET B1** An Addendum will be issued.

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

This contract is a completion date contract. The work begins on the effective date stated in the Notice to Proceed (NTP) and all work is to be completed no later than November 12, 2021. Unusually severe weather is not considered as a delay cause. The NTP will be issued with an effective date of January 18, 2021.

1. TRAFFIC CONTROL AND SEQUENCE OF OPERATIONS

A. Traffic Control. Accomplish traffic control in accordance with Section 618 and the following.

B. Sequence of Operations. In addition to the requirements of Subsection 104.05, Maintenance of the Work, and Subsection 108.04, Limitation of Operations, schedule operations in the sequences outlined below to provide the least amount of inconvenience possible to the traveling public.

- Do not detour traffic prior to July 2nd without permission from MDT's Project Manager.

C. Method of Measurement and Basis of Payment.

CONTRACT NO. 06B20

Montana Department of Transportation
Construction Contracting Bureau

Date(s) Issued:
December 14, 2020

A D D E N D U M

For The Following Project(s)
To Be Let On:
December 17, 2020

Call # 202 – Stillwater River – 2M NW Absarokee
STPB 9048(49)

ADDENDUM NO. 1
ATTACHMENT NO. 1

REVISED SCHEDULE OF ITEMS
Changing quantity for Item #s:
555 010 100 – Reinforcing Steel – 42,077 LB
607 100 388 – Fence-Wood-3 Rail – 64.00 LNFT
607 100 440 – Farm Gate-Metal-Type G-3 – 12.00 LNFT

REVISED SPECIAL PROVISION NO. 2
Changing Special Provision #2 Contract Time to Contract Time – Completion Date
Completion Date November 12, 2021
NTP January 18, 2021
New Special provision is linked to the Q & A and will be found in the awarded Proposal

INSTRUCTIONS – READ CAREFULLY

Load the electronic amendment file while in the opened project file to apply the addendum. In order to be responsive, the Schedule of Items printout on projects with addendums must show the addendum(s) applied at the bottom of each page.

Revised documents supersede and replace the documents you now have. New documents supplement the documents you now have. Make the necessary changes in your bidding documents.

Darin Reynolds, Bureau Chief
Construction Contracting Bureau

MONTANA DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

CONTRACT ID: 06B20

PROJECT: STPB 9048(49) (867048000)
STILLWATER R - 2M NW ABSAROKEE

PROP LINE NO.	ITEM NUMBER	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY
	SECTION 0001 - BRIDGE REPLACEMENT, GRADING, GRAVEL, DRAINAGE, AND FENCING			
0010	103 500 005	ESCROW OF BID DOCUMENTS	LS	1.00
0020	104 030 010	MISCELLANEOUS WORK	UNIT	15,000.00
0030	104 030 060	MISCELLANEOUS ITEMS-CUYD	CUYD	190.00
0040	105 070 000	CONTRACTOR SURVEY AND LAYOUT	LS	1.00
0050	108 000 000	CRITICAL PATH SCHEDULE	LS	1.00
0060	109 200 005	MOBILIZATION	LS	1.00
0070	202 020 041	REMOVE STRUCTURE	LS	1.00
0080	202 020 540	REMOVE MISCELLANEOUS ITEMS	LS	1.00
0090	203 020 375	EMBANKMENT IN PLACE	CUYD	663.00
0100	203 080 100	TOPSOIL-SALVAGING AND PLACING	CUYD	269.00
0110	208 010 000	BMP ADMINISTRATION-LS	LS	1.00
0120	208 010 200	TEMPORARY EROSION CONTROL-FIXED	UNIT	500.00
0130	301 020 254	BRIDGE END BACKFILL-TYPE 3	CUYD	130.00
0140	301 020 268	TRAFFIC GRAVEL	CUYD	100.00
0150	301 020 450	SPECIAL BACKFILL	CUYD	445.00
0160	301 020 526	TOP SURFACING GR 3B	CUYD	436.00
0170	401 020 055	COMMERCIAL MIX-3/8 IN-PG 64-28	TON	37.00
0180	402 020 315	EMULSIFIED ASPHALT-TACK COAT	GAL	14.00
0190	551 020 035	CONCRETE-CLASS STRUCTURE	CUYD	92.80
0200	551 020 166	CONCRETE-CLASS DRILLED SHAFT	CUYD	99.20
0210	552 010 053	BRIDGE SUPERSTRUCTURE	LS	1.00
0220	555 010 100	REINFORCING STEEL	LB	**42,077.00**
0230	555 010 200	REINFORCING STEEL-EPOXY COATED	LB	1,092.00
0240	557 010 010	BRIDGE RAIL-W740-CSC	LNFT	313.70
0250	558 000 160	DRILLED SHAFT - 5.0 FT	LNFT	170.00
0260	558 001 225	DRILLED SHAFT CASING	LB	43,869.00
0270	603 000 050	GRANULAR BEDDING MATERIAL	CUYD	41.00
0280	603 000 060	FOUNDATION MATERIAL	CUYD	82.00
0290	603 012 530	RCP 18 IN	LNFT	60.00
0300	603 013 361	REIN CONC BOX 8 X 6	LNFT	84.00
0310	607 100 147	FARM FENCE-TYPE F2M-32 IN WW	LNFT	503.00
0320	607 100 362	FARM FENCE-PANEL/SINGLE FM	EACH	5.00
0330	607 100 385	FARM FENCE-PANEL/DOUBLE FM	EACH	6.00
0340	607 100 388	FENCE-WOOD-3 RAIL	LNFT	**64.00**
0350	607 100 440	FARM GATE-METAL-TYPE G-3	LNFT	**12.00**
0360	607 100 450	FENCE-PEDESTRIAN PASS	EACH	1.00
0370	607 100 551	FENCE-TEMPORARY	LNFT	465.00
0380	607 100 720	DEADMAN	EACH	4.00
0390	610 100 101	SEEDING AREA NO 1	ACRE	0.50
0400	610 100 102	SEEDING AREA NO 2	ACRE	0.10
0410	610 100 555	CONDITION SEEDBED SURFACE	ACRE	0.50
0420	610 100 560	RIPRAP REVEGETATION	SQYD	210.00
0430	610 100 566	EROSION CONTROL BLANKET-SHORT-TERM	SQYD	29.00
0440	613 100 040	RIPRAP-CLASS 2 RANDOM	CUYD	295.00
0450	613 300 050	BANK PROTECTION-TYPE 3	CUYD	44.00
0460	614 100 014	DESIGN, CONST RETAINING WALL	SQYD	42.00
0470	618 030 015	TRAFFIC CONTROL-FIXED	UNIT	500.00
0480	618 030 080	TRAFFIC CONTROL-LS	LS	1.00
0490	619 010 086	SIGNS-ALUM REFL SHEET IV	SQFT	10.60
0500	619 010 090	SIGNS-ALUM REFL SHEET XI	SQFT	89.20

PROP LINE NO.	ITEM NUMBER	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY
0510	619 010 230	REMOVE SIGN	EACH	4.00
0520	619 010 310	POSTS-STEEL U SIGN	LB	88.00
0530	619 010 480	POLES-TREATED WOOD 4 IN	LNFT	144.00
0540	622 011 043	PERM EROSION CONTROL-HIGH SURV	SQYD	492.00
0550	622 011 084	GEOTEXTILE STABILIZATION	SQYD	282.00

TABLE OF CONTENTS
FEDERAL AID PROJECT(S) STPB 9048(49)

1. PROJECT DESCRIPTION [102] 7
2. CONTRACT TIME – FLEX TIME PROCEED DATE [108] (REVISED 1-21-16) 7
3. CONTRACT DOCUMENTS [102] (ADDED 9-17-20) 8
4. DISADVANTAGED BUSINESS ENTERPRISES (DBE) REQUIREMENTS [102] (REVISED 1-18-18) 8
5. DBE QUOTES [102] (REVISED 3-10-16) 8
6. DBE USAGE [102] (REVISED 2-13-20 M) 8
7. LABOR REQUIREMENTS [102] (REVISED 9-5-19) 9
8. CERTIFIED PAYROLL COMPLIANCE ELECTRONIC PAYROLL SUBMISSION [102] (REVISED 3-12-20) 9
9. ZONE PAY [102] (REVISED 5-10-18) 9
10. BIDDING REQUIREMENTS – PROPOSAL GUARANTEE [102] (REVISED 12-17-20) ... 9
11. DELIVERY AND PUBLIC OPENING OF PROPOSALS [102](ADDED 9-03-20) 9
12. SOIL BORING INFORMATION [102] (REVISED 1-16-14) 10
13. 103.07 EXECUTION AND APPROVAL OF CONTRACT [103] (ADDED 6-13-19) 10
14. BIDDER'S PROPOSED AGGREGATE SOURCE(S) [103] (REVISED 1-24-19) 10
15. ESCROW OF BID DOCUMENTS [103] (REVISED 9-30-10) 11
16. CONTRACTOR SURVEYING AND LAYOUT - DEPARTMENT STAKING [105] (REVISED 7-10-14) 11
17. SUBMISSION OF CERTIFIED CLAIMS [105] (ADDED 4-23-20) 11
18. STEEL PRICE ADJUSTMENT [106] (REVISED 4-25-19) 12
19. TELECOMMUNICATION OR VIDEO SURVEILLANCE EQUIPMENT, SERVICES, OR SYSTEMS [107] (ADDED 10-08-20) 14
20. NOISE IMPACT [107] (REVISED 5-24-12) 14
21. STORM WATER PERMITTING REQUIREMENTS UNDER THE MONTANA POLLUTANT DISCHARGE ELIMINATION SYSTEM (MPDES) [107] (REV 3-16-17) 14
22. INCREASE IN TURBIDITY [107] (REVISED 10-8-15) 16
23. STREAM PROTECTION ACT 124 [107] [208] 16
24. CLEAN WATER ACT SECTION 404 PERMIT AND SECTION 401 CERTIFICATION ... 17
25. MONTANA FLOODPLAIN AND FLOODWAY MANAGEMENT ACT [107] 19
26. WATERWAY PASSAGE AND SIGNING 20
27. MIGRATORY BIRD TREATY ACT COMPLIANCE - STRUCTURES [107] (REVISED 12-8-16) 21
28. MIGRATORY BIRD TREATY ACT COMPLIANCE – STRUCTURES-MAINTENANCE [107] (REVISED 11-14-13) 22

29. MIGRATORY BIRD TREATY ACT COMPLIANCE -VEGETATION REMOVAL [107] (ADDED 9-26-13)....22
30. AIS WATERCRAFT AND EQUIPMENT INSPECTION [107] (ADDED 4-25-19)....22
31. PUBLIC INVOLVEMENT [107] (REVISED 4-25-19)....23
32. NEMONT COMMUNICATION LINE....24
33. STATUS OF UTILITIES [108] (ADDED 1-1-03)....24
34. NOTICE TO BIDDERS [108] (ADDED 11-21-08)....25
35. REMOVE MISCELLANEOUS ITEMS....25
36. LONGITUDINAL JOINT COMPACTION [401] (REVISED 10-10-19)....25
37. PRE-FABRICATED TRUSS....26
38. CONCRETE - CLASS STRUCTURE LOW SLUMP....29
39. STRIP SEAL EXPANSION JOINT....29
40. MODIFIED BRIDGE DECK CONCRETE WATER CURE [551] (REVISED 3-2-2020)....30
41. BASE PRICE FOR CONCRETE [551] (ADDED 3-12-15)....32
42. BRIDGE DEMOLITION NOTIFICATION....32
43. REINFORCED CONCRETE PIPES, BOXES, INLETS AND MANHOLES [603] (ADDED 12-13-18)....32
44. PRECAST REINFORCED BOX CULVERTS [603] (REVISED 2-18-16)....32
46. DESIGN, CONSTRUCT RETAINING WALL....35
47. MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL (REVISED 12-11-15)....35
48. GRAVITY RETAINING WALL....41
49. CULVERT FOUNDATION TREATMENT (REVISED 12-11-15)....46
50. SPECIAL BACKFILL FOR RCB CULVERT (REVISED 12-11-15)....46
51. IRRIGATION OPERATOR CONTACT/COORDINATION....47
52. IRRIGATION SYSTEM RELOCATION/MODIFICATION....47
53. TRAFFIC CONTROL – ROAD CLOSURE....47
54. TRAFFIC CONTROL DEVICES – PLASTIC DRUMS [618] (REVISED 1-23-20)....48

SECTION II
Nondiscrimination Notice
Seeding Special
Logs of Boring

SECTION III
Standard Provisions & Requirements

SPECIAL PROVISIONS

FEDERAL AID PROJECT NO(S). STPB 9048(49)

(REVISED 12-17-20)

The following special provisions are hereby made part of the contract and supplement and/or supersede and 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 2020 V1.3 Edition" found at the following link: https://www.mdt.mt.gov/other/webdata/external/const/specifications/2020/SPEC-BOOK/2020-SPEC-BOOK-V1-3.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_121720_LETTING.pdf

The latest version of the Standard and Supplemental Specifications, Quarterly 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 replacement, grading, gravel, drainage, and fencing on the Stillwater R-2 M NW Absarokee project located in Stillwater County. The project is located on Stillwater County Local Route L48249 North (Johnson Lane) between RP 0.4 and RP 0.5 and L48213 North between RP 2.6 and RP 2.7.

2. CONTRACT TIME – FLEX TIME PROCEED DATE [108] (REVISED 1-21-16)

A. General. This provision modifies Subsection 108.02 of the Specifications.

B. Notice to Proceed. The notice to proceed will be issued with an effective date of January 18, 2021. The Contractor may change the notice to proceed date to an earlier date if written notification is received at least ten calendar days in advance of the date selected and the selected date is approved by the Project Manager. Include an updated schedule with the notification.

C. Contract Time. Contract time assessment will begin on the notice to proceed date issued by the Department or as changed by the Contractor, whichever is earlier. Work is to be completed in 140 working days.

3. CONTRACT DOCUMENTS [102] (ADDED 9-17-20)

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/ :

- Table of Contractor's Submittals
- Traffic Control Rate Schedule
- 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 5.1% 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 Billings.

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. ZONE PAY [102] (REVISED 5-10-18)

Wage rates and zone pay requirements can be found elsewhere in the proposal. The mileage for determining the zone is 59 miles.

Indicate the Zone requirements for all classifications. Provide this information to the Project Manager at the Preconstruction Conference on Form MDT-CON-102_02.

10. BIDDING REQUIREMENTS – PROPOSAL GUARANTEE [102] (REVISED 12-17-20)

Subsection 102.07(C)(2), Proposal Guarantee, of the Standard Specifications is hereby rescinded and replaced with the following:

Proposal Guarantee. The bid bond is on the most current version of MDT-CTP-102-07-1; is signed and sealed in the proper places; a copy of the agent's Power of Attorney for the insurance company is attached; and contains the correct and complete project number; all signatures are original (stamped signatures are unacceptable). A qualified third-party surety agency must verify the proposal guarantee. Electronic bid bond verification must be submitted through AASHTOWare Project Bids and Bid ExpressTM . Contact Bid Express for more information on electronic bid bond verification.

If an error occurs with electronic bid bond verification through AASHTOWare Project Bids and Bid Express, submit the Electronic Bid Bond Form MDT-CTP-102-07-2 in Adobe PDF format via email to mdtcntplns@mt.gov prior to the bid opening. Hard copy or paper bid bonds submitted to the Department will not be accepted. Bids that include submission of a bid bond without electronic verification or Electronic Bid Bond Form CPB_102_07 will be deemed non-responsive.

11. DELIVERY AND PUBLIC OPENING OF PROPOSALS [102](ADDED 9-03-20)

Subsection 102.10A Bid Submission by Sealed Envelope is hereby rescinded.

Submissions by sealed envelope will be deemed non-responsive.

12. 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.

13. 103.07 EXECUTION AND APPROVAL OF CONTRACT [103] (ADDED 6-13-19)

Use DocuSign to sign the contract in accordance with Subsection 103.07.

No later than 5 calendar days after the date of bid-opening (the date of bid opening to count as the first full day), the apparent low bidder must submit to Construction Contracting Bureau, during its regular work hours, a fully completed Contract Recipients Form documenting names and emails of authorized agents of the Contract and Surety to sign the contract. If the 5th day is a holiday, turn the documentation in earlier. The Contract Recipients Form is available at the following web page: https://www.mdt.mt.gov/publications/forms/contract-recipients.shtml.

The bid proposal may be considered non-responsive and rejected if the above form(s) are not submitted within the required time frame.

14. BIDDER'S PROPOSED AGGREGATE SOURCE(S) [103] (REVISED 1-24-19)

No later than 7 calendar days after the date of bid-opening (the date of bid opening to count as the first full day), the apparent low bidder must submit to Construction Contracting

Bureau, during its regular work hours, a fully completed Form MDT-CON-106-02-3 for each aggregate source the bidder used to prepare its bid, or a subcontractor used to prepare its quote, if used by the bidder for its bid. (If the 7th day is a holiday, turn the documentation in earlier.)

The Bidder's Proposed Aggregate Source form is available at the following web page: http://www.mdt.mt.gov/publications/forms.shtml#hig.

The bid proposal may be considered non-responsive and rejected if the above form(s) are not submitted within the required time frame.

15. ESCROW OF BID DOCUMENTS [103] (REVISED 9-30-10)

Escrow of bid documents under 103.09 is required for this contract.

16. CONTRACTOR SURVEYING AND LAYOUT - DEPARTMENT STAKING [105] (REVISED 7-10-14)

Furnish Contractor Survey and Layout in accordance with Subsection 105.08.2 with the following exceptions:

- The Department will conduct all right-of-way and monumentation surveys.
- The Department will determine the slope stake catch point and provide copies of the slope staking notes to the Contractor. Replace any stakes that are obliterated by the Contractor or by construction activities.
- Unclassified Excavation, Embankment in Place and Unclassified Borrow items will be measured for payment.

17. SUBMISSION OF CERTIFIED CLAIMS [105] (ADDED 4-23-20)

This provision rescinds and replaces the first two paragraphs of Subsection 105.16.2.

If an agreeable resolution is not reached within 14 calendar days of the written notice, the Contractor may submit a Certified Claim by completing the Certified Claim form MDT-CON-105-16-2 to the Project Manager no more than 7 calendar days after receipt of the Project Manager's response. The form is available from the Project Manager or the Department's website. Include all Claim Cost Records to date with the Certified Claim. Submit electronic copies to the DCE and the CES Engineer of the Engineering Division. The Project Manager will continue to attempt to resolve the disagreement after the Certified Claim is submitted.

Detail the following, if applicable, in the Certified Claim:

A. Summary. (label page 1.1 through page 1.X) Include a detailed, factual statement of the claim for additional compensation and contract time, if any, with necessary dates and locations of work involved in the claim. Also include detailed facts supporting the Contractor's position.

B. Proof of Notice. (label page 2.1 through page 2.X) Submit notice of claim with all attachments that was furnished to the Department. Include the date when the written notice was given.

C. Supporting Documents. (label page 3.1 through page 3.X) Furnish copies of the contract specifications that support the Contractor's claim.

D. Theory of Entitlement. (label page 4.1 through page 4.X) Include a narrative of how or why the specific contract specifications support the claim.

E. Itemized Lists. (label page 5.1 through page 5.X) Provide an itemized list of claimed damages that resulted from the event with a narrative of the theories and records and documents used to arrive at the value of the damages.

F. Time Requests. (label page 6.1 through page 6.X) Provide additional contract time requests if the claim is for a combination of additional compensation and contract time. Submit a copy of the schedule that was in effect when the event occurred and a detailed narrative which explains how the event impacted contract time. In addition, if the Department-caused delay is claimed, provide the following:

1) Include the specific days and dates under claim;

2) Provide detailed facts about the specific acts or omissions of the Department that allegedly caused the delay, and the specific reasons why the resulting delay was unreasonable; and

3) Provide a schedule evaluation that accurately describes the impacts of the claimed delay.

G. Expense Records. (label page 7.1 through page 7.X) Submit copies of actual expense records. Include documents that contain the detailed records which support and total to the exact amount of additional compensation requested. Include the information and calculations necessary to support that amount. At a minimum, provide the following:

1) Direct materials.

2) Direct equipment. The rate claimed for each piece of equipment not to exceed the actual cost. For each piece of equipment, include a detailed description of the equipment and attachments, specific days and dates of use or standby, and specific hours of use or standby.

3) Direct labor; and

4) Other categories as specified by the Contractor or the Agency.

H. Supporting Records. (label page 8.1 through page 8.X) Provide additional supporting records and documents including copies of, or excerpts from the following:

1) Any documents that support the claim, such as manuals standard to the industry and used by the Contractor; and

2) Any daily reports or diaries related to the event, photographs or media that help explain the issue or event.

I. Certification. (label page 9.1 through 9.X) Provide a certified statement, signed by a representative authorized to execute change orders, by the Contractor, subcontractor, supplier, or entity originating the claim as to the validity of facts and costs

J. Lower Tier Claim. (label page 10.1 through 10.X) If the claim includes work done or costs incurred by any subcontractors, suppliers, or any entity other than the Contractor, the following are required:

1) Copies of the Contractor's, subcontractor's, supplier's and entity's (at all tiers above the level of which the claim originates) separate evaluation of entitlement.

2) Copies of the Contractor's, subcontractor's, supplier's and entity's (at all tiers above the level of which the claim originates) independent verification and evaluation of the amount of damages sought; and

3) An authorized representative to execute change orders on behalf of the Contractor, Subcontractor, Supplier and Entity (at all tiers above the level of which the claim originates).

If the Project Manager determines that additional information, records, or documentation is needed to allow proper evaluation of the claim submittal, the Project Manager will request the information, records, or documentation. Submit the requested information to the Project Manager within14 calendar days.

If the claim includes requests for delay compensation, follow all procedures in Subsection 108.07.6.

18. STEEL PRICE ADJUSTMENT [106] (REVISED 4-25-19)

A. General. The Department may apply a Steel Price Adjustment to payments for the applicable steel items of work listed in the contract as payment to the contractor or a credit to the Department. Payments will only be made for fluctuations in the cost of the steel used in the items of work listed in the contract. No adjustment will be made for changes in the cost of manufacturing, fabrication, shipping, or storage.

Payments may be positive, negative, or non-existent depending on the circumstances. Payments or deductions for the steel price adjustment will be calculated by the Project

Manager. No steel price adjustments will be made for any products manufactured from steel purchased from the mill prior to the letting date.

Notify the Project Manager in writing by the Notice to Proceed date or at the pre-construction conference, whichever comes first, of intent to participate in steel price adjustment. The price adjustment will be based on a base price per pounds of steel. The base price is provided to the Department by the National Steel Bridge Alliance monthly and updated as necessary.

- The current base price per pound of steel is: $0.55.

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 or rebasing of the index.

B. Applicable Bid Items. The Department may apply a steel price adjustment to steel quantities in certain items. The cost of the steel within the item must be at least $5,000 to qualify for a steel price adjustment.

Nuts, bolts, rebar chairs, connecting bands, and other miscellaneous hardware items will not be included in the price adjustment. No other items will be considered for a price adjustment.

C. Steel Price Index. Furnish the following documentation for all steel bid items applicable to the steel price adjustment:

1) The weight of steel (pounds) to be incorporated into the various items of work covered by this special provision.

2) Steel Certification and Mill Test Reports.

3) The date that the steel item, subject to adjustment, was shipped from the producing mill.

Accompany the above documentation by an affidavit signed by the Contractor stating that the information provided is true and accurate. Submit all documentation, including the affidavit, to the Project Manager 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. 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-1.1)
If AF is equal to or less than 0, no adjustment.
If AF is greater than 0.0, continue
Price Adjustment = AF x quantity x base price

For Decreases:
Adjustment Factor (AF) = (IC/IB-0.9)
If AF is equal to or greater than 0, no adjustment.
If AF is less than 0.0, continue
Price Adjustment = AF x quantity 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)

19. TELECOMMUNICATION OR VIDEO SURVEILLANCE EQUIPMENT, SERVICES, OR SYSTEMS [107] (ADDED 10-08-20)

2 CFR 200.216 has been added to the Code of Federal Regulations and became effective August 13, 2020. Ensure any telecommunications or video surveillance equipment, services, or systems used or installed on Federal-Aid Projects comply with 2 CFR 200.216.

20. NOISE IMPACT [107] (REVISED 5-24-12)

To minimize construction noise impacts on the local residents, no construction activities will be allowed between the hours of 10 p.m. and 6 a.m. without express written approval from the Project Manager.

21. STORM WATER PERMITTING REQUIREMENTS UNDER THE MONTANA POLLUTANT DISCHARGE ELIMINATION SYSTEM (MPDES) [107] (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. INCREASE IN TURBIDITY [107] (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.

23. STREAM PROTECTION ACT 124 [107] [208]

A. Description. The proposed project has been authorized by Preconstruction Stream Protection Act (SPA) 124 No.: MDT-R5-34-2020 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
ST 11+34 MDT Structure 04474	Stillwater River

B. General Conditions

1) Meet the MDT Standard Specifications listed in Subsection 208.03.3.

2) Install and maintain Best Management Practices and temporary erosion control measures where appropriate to protect the waterbodies and adjacent areas listed in the table above. Conduct all work in a manner that minimizes turbidity and other disturbance to these areas.

3) Clean equipment and ensure it is free of weeds, weed seeds, and excess grease before using it in the waterway. To prevent the spread of aquatic invasive species, remove mud and aquatic plants from heavy machinery and other equipment before moving between waters and work sites. Drain water from machinery and let dry before moving to another location.

4) All surface applied erosion control materials used in or adjacent to the waterbodies listed in the table above must comply with Supplemental Specification 713.12 and be comprised of natural fiber and biodegradable material to ensure decomposition. This condition also applies to mesh materials used for wattles, rolled materials, and bank wraps placed within the bed and banks of the waterbodies listed in the table above. Limit the clearing of vegetation to only what is necessary for the construction of the project within riparian areas. Restore temporary access routes and any temporarily disturbed areas to original conditions, including original contours and vegetation reclamation.

5) Obtain a temporary facility SPA 124 Permit/Authorization. This Preconstruction SPA 124 Permit/Authorization does not cover the construction of temporary facilities such as work bridges, work pads, cofferdams, temporary detours, diversions, etc. This authorization does not include removal and disposal of the existing structure, access to and from authorized locations, sequencing and construction methodology to construct authorized features, or any other unauthorized impacts affecting permitted drainages. These items, and any other items not covered here but potentially affecting a stream/river or its channel(s), need to be permitted separately by the Contractor.

C. Special Conditions

1) TIMING RESTRICTION: Conduct in-channel work only between December 1 to March 1 and July 1 to October 15 for the protection of fisheries resources.

2) 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.

3) Obtain a Short-Term Water Quality Standard for Turbidity (318 Authorization) from DEQ.

4) Ensure that boater and floater passage is maintained during construction.

5) Ensure that any woody debris lodged against bridge piers is not removed from the river but allowed to remain in the active channel downriver.

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

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

24. 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 14 Description. The permanent features of this project are authorized under US Army Corps of Engineers Nationwide Permit 14 – Linear Transportation Projects, (Army Corps File Number NWO-2020-01303-MTB).

1) The permit for this project authorizes the following permanent features within waters of the US. Stillwater County; Section 35, Township 35 North, 18 East.

a) Removal and replacement of bridge over the Stillwater River. Remove old 15.5' x 163' 4-span combination truss and timber bridge and replace it with a 25.5' x 155' single span pony truss bridge. Construction activities would result in approximately 100 LF of permanent impacts to the Stillwater River from the installation of rock riprap. Latitude 45.528493, Longitude -109.469499.

b) Remove an old 12' x 6' x 20' Reinforced Concrete Box Culvert (RCB) on Garrigus Ditch and replace it with an 8' x 6' x 84' RCB in the same location. Additionally, the project would include the installation of a new 18" x 18' RCP on Garrigus Ditch. As a result of construction activities, a total of 81 LF of the Garrigus Ditch would be permanently impacted. Latitude 45.529040, Longitude -109.469464.

c) Fill material would also be placed in Wetlands 1, 2, 3, 4a, and 4b for the completion of this project and would result in a permanent loss of 0.017 acres of emergent wetlands.

2) This authorization is valid until March 18, 2022.

3) Obtain the Nationwide Permit 14 Fact Sheet that fully describes the Nationwide Permit 14 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.

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

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

c) Includes features that extend out from the existing bank line greater than 25% of the bankfull channel width;

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

e) 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,

f) 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 18, 2022.

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 2017 Nationwide Permits Regional Conditions, Omaha District, State of Montana, Effective March 19, 2017, 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.

2) All erosion control blanket or fabric used in or adjacent to waters of the U.S. 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 US must be removed.

E. CWA Section 401 Water Quality Certification is granted for Nationwide Permits 14 and 33 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 March 6, 2017. Adhere to those general and special conditions.

2) Adhere to the notification requirement of the DEQ 401 Certification Special Conditions. Notify the DEQ Water Protection Bureau – Discharge Permitting Program within 48 hours of commencement of the regulated activity. Send notification to DEQWPBPublicComments@mt.gov . Provide confirmation of this notification to the Project Manager. Notification shall include at minimum the following information:

a) Statement that the notification is being submitted for an MDT Project

b) MDT Project Name

c) Statement that the work is being conducted under a CWA Nationwide Permit 14

d) The legal description(s) of the permitted activities included in Section B above

e) The decimal latitude(s) and longitude(s) to the millionth degree (six significant figures to the right of the decimal point) for the permitted activities, which are provided in Section B above

F. Copies of the 2017 Nationwide Permit Fact Sheets for Nationwide Permits 14 and 33, the 2017 Nationwide Permit Regional Conditions for the State of Montana, and DEQ's 401 Water Quality Certification requirements for the 2017 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 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.

25. MONTANA FLOODPLAIN AND FLOODWAY MANAGEMENT ACT [107]

A. Description: This contract is located within the regulated floodplain of the Stillwater River, Stillwater County, Community Panel Number 30095C0838D. The Department has obtained a preconstruction floodplain permit from the Stillwater County, PO Box 1276, Columbus, MT 59019, 406-322-8055 for the permanent features associated with this contract. A copy of this floodplain permit is available upon request from the Project Manager.

This floodplain permit does not cover the construction of temporary facilities such as work bridges, work pads, cofferdams, temporary detours, diversions, etc. This permit does not include access to and from authorized locations, sequencing, or construction methodology required to construct authorized features, or other impacts to areas outside of the planned construction footprint.

B. Materials. Reserved.

C. Requirements.

1) Contact the floodplain administrator indicated above to determine floodplain permitting requirements, if any, for the temporary facilities and any other work within the floodplain not covered here or within the preconstruction floodplain permit.

2) If a floodplain permit is required, complete and submit the Joint Application for Proposed Work in Montana's Streams, Wetlands, Floodplains, and Other Water Bodies and required information directly to the floodplain administrator according to the floodplain permitting requirements along with the applicable fee. The Joint Application Form can be downloaded from: http://dnrc.mt.gov/divisions/water/operations/floodplain-management/permitting-and-regulations.

3) If a floodplain permit is not required, but the floodplain administrator requires other information, prepare and submit it directly to the floodplain administrator.

4) Submit copies of the application and other required information to the Project Manager concurrently with the submittals required in Subsections 208.03.4(B) and 208.03.4(C). Obtain all required permits or authorizations and furnish copies or permit approvals to the Project Manager before starting activities that require permits.

D. Method of Measurement and Basis of Payment. Work described in this provision is not measured for payment. Include the cost to obtain this permit and provide required information in the mobilization bid item.

26. WATERWAY PASSAGE AND SIGNING

A. General. Provide and sign at all times during the bridge work a passable waterway channel for waterway users.

B. Construction Requirements.

1) Construct falsework and work bridges to provide a minimum 40 ft-wide by 6 ft-high waterway opening. Construct the falsework opening and work bridge piers parallel to the stream flow. Review the site with the Project Manager and Fish, Wildlife and Parks (FWP) contact to determine the best placement of the opening considering channel depth and current. Establish the vertical clearance using hydrological data for the month having the highest flows that the falsework will be in place. Monitor the six-foot clearance daily and immediately remove the structure over the 40 ft opening if rising water reduces the clearance to less than six feet. Provide a 24-hour contact phone number for the person monitoring the river in case of an emergency.

2) If using a barge, submit a work barge plan to the Project Manager for approval prior to beginning barge work. Detail in the plan the barge mooring, barge dimensions, operations to be performed from the barge, and the period of use including the estimated calendar dates. Do not permit the barge or its moorings to encroach into the channel marked by the buoys as described in this provision.

3) Install signs and other traffic control devices on the Stillwater River as follows:

a) Install 5 ½ ft x 3 ft "NAVIGATION RESTRICTION AHEAD" signs on both banks at approximately 500 feet and 1500 feet upstream and downstream of the structure work as well as at the identified FWP Fishing Access Site (FAS) upstream and downstream of the bridge. Attach two Type C Steady burn lights to the top corners of each sign. Place the signs at a point above the high-water level, or as directed, facing oncoming waterway users. Contact the MDT Traffic Section at (406) 444-0700 for sign design calculations.

Downstream: Absaroka FAS

Upstream: Cliff Swallow FAS

b) Channel Marker Buoys. Furnish and install hanging can or anchor buoys to delineate a channel to the falsework opening. Use buoys having the hazard-warning symbol with the "HAZARD AREA" message.

c) Space the buoys on 25 ft centers starting from the falsework and/or bridge to at least 100 feet upstream, measured perpendicular to the upstream structure face. Follow the buoy manufacturer's installation recommendations. Consult with the Project Manager and determine a mutually agreeable date for removing and installing buoys due to river icing. Use buoys and channel markers following the U.S. Aids to Navigation (ATON) system. Contact the U.S. Coast Guard District Aids to Navigation office at (206) 220–7270.

(1) Hanging Can Buoys. Use an aerial cable to suspend the hanging can buoys approximately two feet from the water's surface. Flare the cables out from both sides of the falsework/bridge opening to both shorelines.

(2) Surface Buoys. Lay and anchor the cables to the river/stream bottom for attaching the buoy mooring lines. Ensure the anchor cable is ballasted to prevent it from rising from the river/stream bottom. Flare the cable out from both sides of the falsework/bridge opening to both shorelines.

(3) Falsework and Bridge Opening Lighting. Install Type C Steady burn lights, spaced on maximum 3 ft centers, on the top and sides of the false work opening or bridge opening to be used by waterway users.

(4) During temporary river closure periods, cover or replace “NAVIGATION RESTRICTION AHEAD” signs with the same size and type signs in the same location reading “RIVER CLOSURE AHEAD – TAKE OUT PRIOR TO BRIDGE”.

4) Public Notice. Submit at the preconstruction conference, one copy of the draft public notice for the Project Manager's approval. Once approved, place the notice in the nearest town newspaper and forward copies to local radio station(s) four weeks and two weeks before work restricts the waterway. Include the following in the notice: name of waterway and location of the bridge work, the dimensions of the waterway opening, the time period the restricted waterway opening is anticipated to be in place, and the phone number to call for additional information.

5) Notify Montana Fish, Wildlife and Parks (FWP) at least 48 hours prior to commencing any work which could jeopardize the safety of floaters traveling through the work site in order to activate the temporary river closure process. Include in the notification specific dates, times and anticipated duration of closure required.

FWP Contact Information:

Ryan Taynton, Region 5 Fishing Access Site Program Manager
2300 Lake Elmo Drive
Billings, MT 59405
(Office) 406-247-2964

a) Contact FWP immediately upon completion of this work to lift the temporary river closure.

b) The maximum time allowed for each instance of work requiring temporary river closure is 48 hours. Expedite this work to minimize the temporary river closure period necessary.

C. Method of Measurement and Basis of Payment. Waterway Passage and Signing is not measured for payment. Include the cost of this work in other contract items.

27. MIGRATORY BIRD TREATY ACT COMPLIANCE - STRUCTURES [107] (REVISED 12-8-16)

Description. Migratory birds may nest on the structures affected by this project.

Construction Requirements. Use one or a combination of the following measures for structure removal or work that may directly impact active nests:

1) It is permissible to remove non-active nests (without birds or eggs), partially completed nests or new nests as they are built (prior to occupation).

2) Conduct work that may impact active nests outside of the nesting season, typically between the dates of August 16 and April 15, or when no active nests are present, or;

3) Install nesting deterrents meeting the requirements below prior to the nesting season as follows:

a) Cover or enclose all potential nesting surfaces on the structure with mesh netting or other suitable material to prevent birds from establishing new nests. Use netting or other material with no opening or mesh size greater than ½-inch. Maintain the material/enclosure until the structure is removed or work is completed, or;

b) Apply a non-toxic, non-lethal, bird roosting or landing repellent gel or liquid (do not use smell or taste deterrents) on all potential nesting surfaces on the structure in accordance with the manufacturer's instructions. Reapply the repellant as needed to maintain adequate coverage to prevent new nests from being established, or;

c) Prepare a description of alternate methods of effectively keeping birds from establishing nests during the nesting season, and submit them along with proposed installation dates and methods to the Project Manager for review.

Method of Measurement and Basis of Payment. Work described in this provision is not measured for payment. Consider all costs associated with this provision incidental to performance of the work. Include the cost in the cost of other items.

28. MIGRATORY BIRD TREATY ACT COMPLIANCE – STRUCTURES-MAINTENANCE [107] (REVISED 11-14-13)

A. Description. Migratory birds may nest on the structures affected by this project.

B. Construction Requirements.

1) The Department has installed nesting deterrents. Maintain existing deterrents until the structure is removed or the work is completed to ensure active nests do not become established on the structure. Install additional nesting deterrents as needed.

2) It is permissible to remove non-active nests (without birds or eggs), partially completed nests or new nests as they are built (prior to occupation).

3) Remove the structure when no active nests are present. If active nests become present, remove the structure outside of the nesting season, typically between the dates of August 16 and April 15.

C. Method of Measurement and Basis of Payment. Work described in this provision is not measured for payment. Consider all costs associated with this provision incidental to performance of the work. Include the cost in the cost of other items.

29. MIGRATORY BIRD TREATY ACT COMPLIANCE -VEGETATION REMOVAL [107] (ADDED 9-26-13)

Description. Suitable nesting habitat (trees and shrubs) exists for migratory birds within the construction limits.

Construction Requirements. Perform any required cutting of trees or shrubs between August 16th and April 15th. Remove only those trees and shrubs in direct conflict with the permanent construction limits. Where possible, do not remove, but trim trees and shrubs as necessary for equipment access and construction activities.

Method of Measurement and Basis of Payment. Work described in this provision is not measured for payment. Consider all costs associated with this provision incidental to performance of the work. Include the cost in the cost of other items.

30. AIS WATERCRAFT AND EQUIPMENT INSPECTION [107] (ADDED 4-25-19)

Description. State laws, regulations, and rules are in effect in Montana to prevent the spread of AIS. The following website includes information to aid in the prevention of AIS: http://cleandraindry.mt.gov/.

Requirements. Contact Montana Fish, Wildlife & Parks (FWP) at least 2 weeks prior to operating equipment in or working within an aquatic resource. FWP may require additional inspection or action for aquatic invasive species (AIS) prior to equipment use in any aquatic resource in the State of Montana.

FWP Contact Information		
Fisheries Front Desk:	(406) 444-2449	
Watercraft Inspection Program Coordinator:	(406) 444-5383 – Office	(406) 546-3847 - Cell
Watercraft Inspection Specialist:	(406) 444-5540 – Office	(406) 465-6705 - Cell

1) Ensure all watercraft vessels and equipment that enters Montana from out of state, crosses the continental divide, or enters the Flathead basin is inspected by FWP prior to launch in an aquatic resource in the State of Montana.

2) Clean, drain, dry all watercraft and equipment according to FWP guidelines after exiting any aquatic resource and prior to launch into or use in another aquatic resource.

Method of Measurement and Basis of Payment. Work described in this provision is not measured for payment. Consider all costs associated with this provision incidental to performance of the work. Include the cost in the cost of other items.

31. PUBLIC INVOLVEMENT [107] (REVISED 4-25-19)

A. The Department may provide public relations or may hire a public involvement (PI) firm to develop and administer a communication plan. Coordinate activities with the PI firm or Department. The name and contact information for the PI firm will be available from the Project Manager following award of the contract.

Attend all public meetings held by the PI firm or Department. Public meetings may be held up to once per week. Provide a brief description of current operations, an anticipated schedule of work for the upcoming week, description of current detours, delays, closures, and possible effects on residents and businesses, such as temporary loss of access and construction traffic.

1) Coordinate with the PI firm or Department to develop a written summary of the intended operations at least 10 calendar days prior to the start of construction or any disruption of traffic.

2) Upon approval of a traffic control plan and at least 10 calendar days prior to beginning construction and disrupting traffic, coordinate with the PI firm or Department to provide appropriate information to the media. This information must specify at a minimum the impact of the construction on the public, duration, sequence of the work, and project overview.

B. Contractor Requirements – During Construction. For the purposes of this special provision, the period “during construction” is defined as the time beginning at the point when normal traffic operations are first disrupted and ending when all work is complete. During this period, perform the following tasks;

1) If requested, install signs on the project denoting the portable radio station information and Contractor phone number for problems and complaints regarding the project. Maintain these signs until the resumption of normal traffic operations. Install signs at locations approved by the Project Manager. Signs will be paid for in accordance with the Traffic Control Rate Schedule if required.

2) Coordinate with the PI firm or Department so they can contact and inform individual businesses and residents at least 3 calendar days prior to conducting operations at locations that may affect their access or convenience.

3) Provide contact information.

a) Provide a 24-hour contact number to the Project Manager for emergency use.

b) Provide a Contractor staffed local telephone number with live personnel available to answer the phone during working hours, for public comments, questions, or complaints. Ensure the telephone has been connected and in service before any work is commenced that has the potential for inconveniencing any residence or business establishment adjacent to the project. Make the phone number available to the public by furnishing it to the PI firm or Department for news/information releases and including it in the traffic advisory constant loop on the Department's portable radio station, if available. Do not use answering machines during working hours; answering machines are acceptable after working hours, with all messages answered by completion of the next workday. Maintain a written log of calls that identifies the caller; the nature of the comment, question, or complaint; and disposition. Make the log available to the Project Manager upon request.

c) Act within 24 hours to resolve complaints about safety and convenience. Refer changes in project design, traffic control, or extra work to the Project Manager for approval before acting.

4) The PI firm or the Department will update the media. Coordinate with the PI firm or Department so they can provide regular, at least once per month, project status reports and future impacts to the travelling public, landowners, and businesses. Make updates and traffic advisories available to them as well to facilitate positive news coverage. The goal is to garner news coverage of the project any time major changes or milestones occur.

Coordinate with the PI firm or Department so they can provide project advisories in the form of radio spots, if requested.

Ensure advisories include the Contractor provided contact number for the public to call for additional information. Coordinate with the PI firm or Department to update the advisories after every weekly progress meeting; or more often if conditions change substantially, such as significant unanticipated schedule changes and changes in detour routes as applicable.

C. Method of Measurement and Basis of Payment. Public Relations and coordination with the PI firm is not measured separately for payment.

This provision does not alter or cancel any other contract provision such as, but not limited to, control of the work, legal relations and responsibility to property owners, and measurement and payment.

32. NEMONT COMMUNICATION LINE

A. Description. This work consists of coordinating construction with the installation of a Nemont communication line. Nemont Telephone has an existing 25-pair copper communication line, running through conduit, hanging off the bridge that is to be replaced. In order to perpetuate service to the users of this line, Nemont Telephone will need to tie into a different 25-pair copper line that exists on the north end of the project and lay a temporary 12-pair communication line across the canal, out of the way of construction, and tie into their line on North Stillwater Road. Due to the nature of the terrain and right of way constraints, Nemont needs to install a 2" schedule 80 conduit crossing perpendicularly underneath the new box culvert at approximately station 13+30, job right. When the project is complete, Nemont will come back and install their line in its permanent location utilizing this conduit.

B. Construction Requirements. Contact Jim Tuell with Nemont at (406)620-7011 two weeks prior to beginning work on the box culvert. Coordinate the installation of the box culvert with Nemont and Jim so that they can lay their conduit in the trench, below the bedding, before the box culvert is placed over the top of it.

C. Basis of Payment. All work and costs associated with this work are considered incidental to other items of work and no separate payment will be made.

33. 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.

34. 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.

35. REMOVE MISCELLANEOUS ITEMS

A. Description. This work consists of coordination with the landowner and removing a rock wall from approximately Sta. 12+00.00 RT to approximately Sta. 12+11.50 RT within the construction limits.

B. Construction Requirements. An existing rock wall is located near the northeast corner of the proposed north bridge abutment. The rock wall is the property of Roy Clement (406-698-9246). Contact Roy Clement to coordinate the relocation of these rocks at least two weeks in advance of the relocation. Relocate the rocks from the existing rock wall to an agreed upon location on Roy Clement’s property that is outside the construction limits and County right-of-way.

C. Method of Measurement and Basis of Payment. Include the cost of furnishing tools, materials, equipment and labor necessary to complete all the work described in this provision in the lump sum bid for Remove Miscellaneous Items. Payment at the contract unit price is full compensation for all resources necessary to complete the item of work in accordance with the contract.

36. LONGITUDINAL JOINT COMPACTION [401] (REVISED 10-10-19)

Construct all longitudinal joints of new plant mix with either a notched wedge joint or taper the joint edges at a 4H:1V to 6H:1V slope. Confined joints created when paving against a vertically milled surface are excluded from the requirements of this provision.

If using a notched wedge, ensure the notched wedge joint has a vertical edge of at least the maximum aggregate size and no more than ½ of the compacted lift thickness and then taper down on a slope not steeper than 4H:1V. Uniformly compact the sloped portion of the plant mix notched wedge joint. Use a device attached to the screed for shaping and compaction. Submit information on the device used to the Project Manager.

When placing the second pass (hot lane), overlap the paver screed 1.0 ± 0.5 inches onto the cold plant mix. Do not “bump back” or rake the overlapped material.

Complete compaction rolling in accordance with Subsection 401.03.21. Compact the joint area to at least 91.0% of target maximum specific gravity as determined in accordance with MT 328 with the following exceptions:

- 90.0% - ⅜-inch (9.5 mm) mixes with plan depths of less than 0.12-foot (36 mm).

The joint density is determined from cores taken at randomly selected locations after all rolling is complete and before the roadway is open to traffic, based on the length of joint constructed. The joint area is defined as the tapered area at the overlap of the hot and cold lanes. Furnish the Department with a 4-inch or 6-inch core of the compacted joint for every 4000

feet of joint constructed, and at least 3 per project, at locations directed by the Project Manager. Center the core within the tapered area to include both the hot lane and cold lane. Mark the core as directed. Patch the core holes in accordance with Subsection 401.03.21.

Density acceptance by cores for longitudinal joints does not apply to leveling or isolation lifts that have a depth of less than 0.10-foot (30 mm) thick, or first lifts of plant mix surfacing placed directly over crushed aggregate courses.

Separate the plant mix lift to be tested from the total core. Cut the core to the actual lift thickness within ± 0.15-inch (4 mm). The Department recommends using a saw to separate the lift to be tested from the total core. Perform this work within the project limits or other approved location.

The Inspector will witness all of the above activities before traffic is permitted to use the plant mix lift being tested.

Furnish the core immediately to the Inspector after it is removed, marked and separated. Do not remove the cores from the Inspector's visual control at any time. Re-core as directed any time either the Contractor requirements or procedures within this section are not met. The test results of the replacement core to be used in the QA evaluation for the lot represented will be the actual relative in-place density unless it exceeds:

- 90%; then 90% will be used for the relative in-place density of that core in the QA evaluation.
- 89% for ⅜-inch (9.5mm) mixes with plan depths of less than 0.12 foot (36 mm); then 89% will be used for the relative in-place density of that core in the QA evaluation.

MT 328 is used to establish the target Rice density. The bulk specific gravity (AASHTO T 166) determined for each core will be divided by the target Rice density in effect at the time the hot lane mix was produced to determine the relative in-place density. In the event the rolling Rice density differs by 0.5 lbs/ft^3 between the hot and cold lanes, the Rice densities for that location will be averaged. All results will be reported to the tenth of one percent (0.1%).

The approximate joint quantity represented by each sub-lot is 4000 feet. Additional locations and tests may be required. The quantity represented by 5 tests or approximately 20,000 feet of longitudinal joint constitutes a lot whenever production schedules and material continuity permit. A lot represented by 3 to 7 consecutive random sub-lots will be established when there are short production runs, significant material changes, or other unusual characteristics of the work.

Include all costs of furnishing and cutting the cores in the cost of plant mix surfacing. No separate measurement or payment will be made.

Longitudinal joints are evaluated for density on a lot-by-lot basis in accordance with Subsection 105.03.2 using an F factor of 3. The pay adjustment will be calculated using the equation below. The unit cost will be $4.50/foot of joint. Length is the length of longitudinal joint in the lot.

Pay adjustment = (P/100) x Length x Unit Cost

A 0.05 pay factor will be applied to the lots of longitudinal joint when the average density for the lot (Xn) is from 92.0% to 95.0%, inclusive, of the Maximum Specific Gravity (Rice's Method) and the range (R) is 3 or less.

Include all costs associated with constructing the joint in the cost of plant mix surfacing.

37. PRE-FABRICATED TRUSS

A. Description. Design, fabricate, rate, furnish and install a new steel truss bridge with bolted connections in accordance with the plans, this Special Provision, and the Standard Specifications.

1) Provide a steel truss that meets the design intent and geometric constraints shown on the plans. Use two parallel trusses consistent with the concept, deck width, and span as shown on the plans.

2) Design a reinforced concrete deck with curb. Use epoxy coated reinforcing steel. Account for relative deck displacements by providing a positive means of connection to supporting members. Provide Transverse Deck Grooving. Use 2½ inch concrete cover over the top reinforcement in the bridge deck. Assume that ½ inch of that cover is a sacrificial wearing surface for design of the bridge. Refer to MDT issued Bridge Deck Design Memos, dated June 9, 2015, June 10, 2015, and February 6, 2017.

3) Design and furnish bearings and strip seal expansion joints.

4) Submit superstructure design, geometry, and preliminary HL-93 load rating to the Department for approval before starting construction of the substructure.

5) Update the preliminary load rating and resubmit a final in-service load rating in accordance with MDT's Load Rating Requirements for Bridge Design Contracts

B. Materials.

1) Provide structural steel that meets the following requirements:

STRUCTURAL STEEL	AASHTO M270, Grade 50W
STRUCTURAL STEEL TUBING	ASTM A847
BEARING ASSEMBLY ANCHOR BOLTS FOR BRIDGES	AASHTO M314, Grade 55

2) Furnish and install deck concrete following Special Provision Concrete - Class Structure Low Slump.

C. Surface Preparations Steel - Weathering Steel

1) Construct so that erection marks on the steel are not visible after the structure is completed.

2) Commercially blast all surfaces according to the standard specifications. Refer to SSPC-SP 6.

3) Commercially blast the following surfaces to meet SSPC-SP 10:

a) Top chord, diagonals, and top bracing.

b) Exposed surfaces of bottom chord, floor beams, and bottom bracing.

c) All welded surfaces.

4) Develop even patinas at completion of welding repair and after surface has been accepted by Engineer.

5) Clean members of any debris after deck concrete is placed.

6) Re-develop patina as needed.

D. Design Standards, Rating Standards, and Fabricator Certification.

1) AASHTO LRFD Bridge Design Specification, current Edition.

2) AASHTO Manual for Bridge Evaluation, current Edition

3) MDT Bridge Inspection and Rating Manual, including Interim Guidance (can be found on MDT's Bridge Load Rating Website)

4) Use metal fabricators that are pre-qualified for Certified Bridge Fabricator – Advanced (ABR) with Fracture Critical Endorsement.

E. Loads, Movements, and Displacements. Design the steel truss as a single-span, two-lane bridge with bolted connections with the following design criteria:

1) Future Wearing Surface: 10psf (pounds per square foot).

2) Bridge Rail: 50plf (pounds per linear foot of rail).

3) Curb: 123plf (pounds per linear foot of curb).

4) Future Utility Load: 10plf per edge (pounds per linear foot per utility, attached to floor beam at each bridge edge).

5) Vehicular Live Load Design: HL-93

6) Vehicular Live Load Rating: HL-93, AASHTO Legal Loads, AASHTO SHV loads and both FAST ACT Emergency Vehicle loads (EV2 and EV3).

7) Live Load Deflection: Less than the span length divided by 800 (L/800).

8) Camber the bridge to offset dead load deflections, excluding future wearing surface, such that there is no sag in the finished grade profile. Show the bridge camber on the drawings.

9) Design the bridge bearings and expansion joints to accommodate expansion and contraction within a temperature range of 110°F to -40°F. Show expected movements from the setting temperature in the design and on the plans. Report bearing anchorage forces generated by superstructure expansion and contraction in the design.

F. Bridge Geometric Requirements.

1) The vertical curve shown in the bridge plans is to be achieved by varying the elevations of the floor beams within the truss. Show the final roadway elevation requirements and haunch heights on the fabrication drawings. Submit other proposed options for forming the vertical curve within the bridge to the Department for approval before starting construction of the substructure.

2) Design the truss with a centerline of bearing to centerline of bearing length of 155’-0” and width between truss centerlines of 25’-6”.

3) Design the concrete deck with a 3 percent normal crown, edge-of-deck to edge-of-deck width of 23’-4”, and curb geometry shown in bridge plans.

4) Design and detail foundation connections to allow access to the anchor bolts for ease of installation, maintenance, and inspection. See bridge plans for foundation geometry.

5) The truss dead load (including deck) was assumed to be 338 kips per bent. Provide new substructure calculations if the dead loads are greater than those assumed.

G. Estimated Bridge Plan Quantities. For Informational purposes only.

Concrete -Class Structure Low Slump (YD^3)	Expansion Bearing (Each)	Fixed Bearing (Each)	Epoxy Reinforcing Steel (LB)	Transverse Deck Grooving (SY)
Unknown	2	2	Unknown	350

H. Construction Requirements.

1) Have the bridge fabricator’s representative on site during any field assembly or setting of the truss. Make any field modifications under the direct supervision of the fabricator’s representative.

2) Erect structure in compliance with the Erection Plan and in a manner that prevents damage to all elements of the structure.

3) Do not open traffic under a partially-erected bridge superstructure unless allowed in the Erection Plan or approved by the Professional Engineer who approved, signed, and sealed the Erection Plan.

4) Design any truss field splices as bolted connections. Welding will not be allowed for any field connections of the truss.

I. Submittal Requirements. Submit for approval, three copies of the following:

1) Design calculations and a preliminary HL-93 rating for the steel truss, reinforced concrete deck, bridge bearings, gusset plates, and anchorages. Furnish complete, indexed calculations that are sealed and signed by a Professional Engineer licensed in the state of Montana.

2) Installation, erection, and assembly details and drawings. Refer to Section 556 of the Standard Specifications.

3) Design drawings showing all the changes to bents one and two that are required to accommodate the new truss.

4) Certificate of Compliance stating that the materials and fabrication comply with the requirements set forth in these provisions.

5) Final in-service load rating, including a BrR .xml file and load rating report sealed and signed by a Montana Registered Professional Engineer who has performed the rating or is in responsible charge of the work. Refer to MDT's Load Rating Requirements for Bridge Design Contracts. Changes made to the structure during construction that are not shown in the shop drawings and that also effect the in-service load rating should be documented in the load rating report.

J. Method of Measurement. Include all costs resulting from the requirements of this provision in the lump sum bid for Bridge Superstructure.

K. Basis of Payment. Payment is made for one Bridge Superstructure and includes one pre-fabricated steel truss designed and installed as approved by the Project Manager. Payment is full compensation for the steel truss, reinforced concrete deck, transverse deck grooving, silane sealer, reinforced concrete curb, bearings, and anchorages to the substructure. Also included are all the materials, equipment, tools, and labor necessary to completing the work in accordance with these specifications.

38. CONCRETE - CLASS STRUCTURE LOW SLUMP

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

B. Construction Requirements. Provide 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) 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.

3) 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 Lump Sum bid for Bridge Superstructure

39. STRIP SEAL EXPANSION JOINT

A. Description. Use a strip seal with factory-machined, steel edge members. Use an expansion joint system capable of accommodating the movements determined by the truss manufacturer. Furnish and install the joint system in accordance with these specifications, the plans and the manufacturer's recommendations subject to the approval of the Project Manager. Use a joint system designed to withstand an HL - 93 truck loading and impact in accordance with AASHTO Specifications.

Use an elastomeric seal with the following minimum requirements:

1) Be supplied as one continuous piece from edge of slab to edge of slab.

2) Have claw-locked edges for a watertight fit.

3) Be installed according to manufacturer's recommendations.

4) Have a shape that promotes self-removal of foreign material and maintains an even surface during normal joint movement.

5) Be recessed below the riding surface throughout the normal limits of joint movement.

B. Materials. Use materials conforming to the following:

1) Use steel edge members and all other steel plates, studs and shapes meeting the requirements of AASHTO M 270 Grade 36 or grade 50W (AASHTO M 270M Grade 250 or grade 345W). Use edge members anchored by studs or other means that provide at least the minimum area of anchorage steel shown. Provide at least the minimum clearance between the anchor bars and the deck surface shown on the plans. On any alternate method of anchorage, provide for the above requirements and the attachment to two separate planes of the edge members surfaces. Attach half the total number of anchors to each plane with adjacent anchors attached to alternating planes. Alternate edge members submitted for approval and any additional anchorage for alternate edge members determined necessary by the Department to meet the above requirements are made at no cost to the Department.

2) Elastomer - Use a compound consisting of 100% virgin polychloroprene (neoprene) and conforming to the properties specified by the joint manufacturer, subject to approval by the Project Manager.

C. Submittals. Furnish five sets of shop drawings to the Project Manager indicating all material specifications and dimensions of the fabricated joint assembly. 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. Show all joint setting data on the drawings. Meet all other requirements of sub-section 556.03.2 of the Standard Specifications. Do not begin fabrication of the joint until the Department has approved all the information contained on the shop drawings.

D. Construction Requirements. Install the joint to conform to the roadway cross-section.

1) Paint all AASHTO M 270 (AASHTO M 270M) steel in accordance with the Standard Specifications except that designated with a “W,” indicating weathering steel.

2) Use only certified welders. Ensure that all splice welds develop the full strength of the welded members. Grind smooth all welds in contact with the elastomeric strip seals. Clean any foreign material from the elastomeric strip seals and edge members prior to installation.

3) Use an assembly with provision for final field adjustment at the time of installation. Perform final adjustment of the assembly as directed. Adjust assembly as required to account for thermal movements immediately prior to casting concrete around the assembly.

E. Measurement. Include all costs resulting from the requirements of this provision for both bridge joints in the lump sum bid for Bridge Superstructure

F. Method of Payment. Include all costs associated with providing all material, labor, tools, equipment, and incidentals necessary to complete the work in the unit price bid for Bridge Superstructure.

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. BASE PRICE FOR CONCRETE [551] (ADDED 3-12-15)

Price Reductions for Class Structure, Deck and Overlay items measured by the cubic yard will be calculated using the greater of the contract bid price or $500 per cubic yard. Price Reductions for Class Drilled Shaft item will be calculated using the greater of the contract bid price or $300 per cubic yard.

42. BRIDGE DEMOLITION NOTIFICATION

A. Description. This work consists of submitting a notification form to the Montana DEQ Asbestos Control Program prior to demolition of structures.

B. Construction Requirements.

1) 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 MDT.

2) 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. Direct questions regarding this special to the construction Project Manager (PM).

3) Submit the completed form to DEQ and the project PM at least 10 days prior to commencement of any bridge demolition activities. Provide a copy of the notification acknowledgement to the PM upon receipt from the DEQ.

C. Measurement and Payment. Measurement and payment for the notification is included in other items.

43. REINFORCED CONCRETE PIPES, BOXES, INLETS AND MANHOLES [603] (ADDED 12-13-18)

Furnish RCB, RCP, inlets, and manholes from a plant listed on the Department's QPL.

44. PRECAST REINFORCED BOX CULVERTS [603] (REVISED 2-18-16)

A. Description. Precast reinforced concrete box culvert (RCB) is specified at locations shown on the plans.

B. Materials.

1) RCB. Furnish RCB that meet the requirements HL-93 live loading. RCB must also meet the requirements of ASTM C1577, except the aggregate gradations must meet Subsection 701.01 or a Department approved optimized gradation. Refer to ASTM special design provisions for RCB sizes that are not included in the ASTM table or for any changes in wall thickness. Use Type V cement unless otherwise specified.

2) Joint Sealant. Install flexible plastic gaskets between culvert sections meeting the requirements of Subsection 707.02. Provide joint material that is 1.25 inch (31.75 mm) equivalent diameter (1 inch (25.4 mm) x 1.23 inch (31.12 mm) actual dimensions).

3) External Joint wrap. Furnish Type III, chemically bonded adhesive butyl bands for all joints between box sections meeting the requirements of ASTM C877. Use Type A designation with a sealing bandwidth of 12 inch (300 mm). Apply joint wrap material externally around each joint over semi-liquid paintable butyl rubber-based adhesive primer. Begin each joint wrap at haunch, extend up and over the top of the culvert, and terminate at the other haunch. Extend joint wrap under the haunches as far as possible on each side of the box culvert while maintaining seal with adhesive primer. If two or more pieces are required, lap a minimum of 6 inches (150 mm). Replace punctured or torn joint wrap damaged by culvert installation at Contractor expense.

4) Bedding material. Use granular bedding material for bedding material. Provide a 12-inch (300 mm) thick base. Compact granular bedding by proof rolling with vibratory compactor or by using a method approved by the Project Manager.

5) Flared or Tapered End Section. Furnish precast flared or tapered end sections according to the RCB detail.

6) Optional Cutoff Walls. Cast-in-place or precast cutoff walls are acceptable for the ends of RCB.

7) Reinforcing Steel. Use rebar dowels meeting the requirements of AASHTO M 31, Grade 60 (Grade 420).

8) Epoxy Resin Bonding Adhesive. Meet the requirements of AASHTO M 235 Type 4.

C. Construction Requirements.

1) Joint Tolerance. When placing RCB sections in final position, the gaps between sections must not exceed 0.75 inch (19 mm). Check for misalignment by measuring normal to the walls and slabs. Correct misalignment between sections before adding the next section.

2) Lift Holes. Plug all lift holes and fabrication holes before placing backfill. Use the manufacturer supplied plugs for filling holes in the top slab. Grout all holes in the side and floor slabs.

3) Tie Bolt Holes. Fill the annular area by injecting silicone caulking in tie bolt holes or fill with joint material after installation of the bolt and before placing the washer.

4) Manufacturer's Installation Procedure. Follow the recommended installation procedure provided by the manufacturer. Provide the Project Manager one copy of the recommended procedure ten calendar days before installation.

5) Welding Requirements. Perform all welding on precast member connections in accordance with AWS D1.1 Structural Welding Code.

Alternate Connection – Concrete Edge Protection. Drill holes in RCB end sections at locations shown on the plans. Epoxy bond #6 (#19) rebar dowels with 8 inches (203 mm) minimum protrusion. The required depth of embedment is RCB wall thickness minus 2 inches (50 mm). Minimum distance from edge of RCB to center of hole is 4 inches (100 mm). Follow adhesive manufacturer's recommendations for hole diameter and other installation requirements.

Precast Concrete Curb Connection. When precast concrete curbs are required at the RCB ends, connect the curbs to the RCB using the precast holes in the curb. Mark the hole locations and drill and epoxy bond #6 x 12 inch (#19 x 305 mm) rebar dowels into the RCB a depth of 5 inches. Follow manufacturer's recommendations for hole diameter and other installation requirements. Install curb, centering the dowels in the holes and fill the curb holes with non-shrink grout.

Precast Cut-off Wall Connection. If precast cut-off walls are used, connect the RCB end to the cut-off wall using the precast holes provided in the RCB. Drill 1.5 inch diameter x 6 inch (40 mm x 150 mm) holes in the cut-off wall at each location. Clean hole of loose debris, fill hole in cut-off wall with approved non-shrink grout and install #6 x 12 inch (#19 x 305 mm) long rebar into the hole keeping the rebar centered. Fill remaining hole in RCB with grout.

Fillets. Reinforce fillets with a minimum of #3 grade 60 rebar at 12-inch centers.

6) Submittals. Submit five sets of shop drawings and all supporting hand and computer design calculations to the Project Manager for approval prior to fabrication. Shop drawings may be furnished in Adobe Acrobat Reader (.pdf) format or 11"x17" sheets. All design plans and calculations must be signed and sealed by a Professional Engineer registered in the State of Montana. Calculations are to include load rating factors for design vehicle. Calculate rating factors in accordance with the latest version of the AASHTO Manual of Bridge Evaluation. Submit all welding procedure specifications and welder qualification records to the Project Manager for approval prior to welding precast connections. Submit epoxy bonding system to the Project Manager for approval prior to installation.

D. Method of Measurement. Precast Reinforced Concrete Box Culvert is measured in accordance with Subsection 603.04.

E. Basis of Payment. Include all costs associated with this item, as well as all pumping, bailing, and drainage necessary for foundation preparation, in the unit price bid per foot (meter) for Reinforced Concrete Box Culvert.

Payment at the contract unit price is full compensation for all necessary resources to complete the item of work under the contract.

45. RIPRAP REVEGETATION

A. Description. This work is the incorporation of Granular Bedding between riprap voids and revegetating riprapped banks adjacent to the bridge.

B. Construction Requirements. Fill the spaces and voids between the rocks with Granular Bedding, or native material approved by the MDT Project Manager.

Place a sufficient amount of bedding (or approved native) material over the riprap, so that after settling, the level of the bedding comes to the very top of the rock.

Place topsoil to a 6-inch depth over the bedding material. Acceptable topsoil includes soil meeting Subsection 713.05, or locally obtained topsoil with less than 30% coarse fragments (>0.2 inch) by weight. Place material in a manner that creates a smooth, uniform surface for seeding.

Hand broadcast seed over the soil immediately after placement, regardless of time of year, with the seed mixture below, at the broadcast seeding rate. Scarify the soil immediately prior to and following seeding to incorporate seed to a depth of ¼ to ½ inch into the soil.

RIPRAP REVEGETATION SEED MIX			BROADCAST SEEDING RATE		
SCIENTIFIC NAME	COMMON NAME	VARIETY	% of Mix	Pounds PLS/ Acre	PLS/ sq.ft.
Elymus trachycaulus	Slender wheatgrass	Adanac, Revenue, First Strike or Pryor	12	4.0	13
Elymus lanceolatus spp. riparium	Streambank wheatgrass	Sodar	23	7.0	24
Pascopyrum smithii	Western wheatgrass	Rosana or Recovery	20	10.0	21
Nassella viridula	Green needlegrass	Lodorm	24	6.0	26
Pseudoroegneria spicata	Bluebunch wheatgrass	Goldar, P7 or Anatone	21	7.0	22
		TOTAL	100	34.0	106

- Use individual substitute species only if the recommended species is not available and substitution is approved by MDT's Reclamation Specialist

Erosion Control Blanket: Provide 100% biodegradable erosion control blanket. Acceptable blanket meets Supplemental Specification 713.12(A) – Long Term Blankets. Install the long-term erosion control blanket immediately following broadcast seeding as shown in the plan details. Secure blanket with 12-inch wooden stakes per manufacturer spacing recommendations.

C. Method of Measurement and Basis of Payment. The granular bedding approved native material, topsoil and topsoil placement, long-term erosion control blanket, and seeding are measured and paid for as RIPRAP REVEGETATION at the Contract Unit price per square yard.

46. DESIGN, CONSTRUCT RETAINING WALL

A. Description. Furnish all materials, labor, and equipment necessary to design and construct mechanically stabilized earth (MSE), gravity, or composite (MSE and gravity) retaining walls, Sta. 12+14 – Sta. 12+34, LT, and Sta. 12+14 – Sta. 12+30, RT, in accordance with these specifications, and to the lines, grades, and dimensions shown on the Plans or otherwise established by the Project Manager. Work includes all excavation and grading required to construct the retaining walls.

1) Reference and apply Special Provision specific to retaining wall type.

2) The Department evaluated retaining walls for global stability, sliding, overturning (eccentricity), and bearing capacity. Reinforcement may be required to ensure sufficient overturning (eccentricity) and sliding resistance at some retaining wall locations.

B. Materials.

Facing. Maintain similar color and texture of facing throughout each retaining wall, and all retaining wall locations.

C. Method of Measurement. Design, Construct Retaining Wall is measured per square yard of wall face surface as measured from the top of wall to the top of the leveling pad, complete and in-place. Reinforced backfill material and backfill material is measured separately by the cubic yard in place.

D. Basis of Payment. Payment for Design, Construct Retaining Wall is full compensation for all labor, equipment, materials, tests, investigations, and incidentals necessary to acceptably design and construct the retaining wall. Include all costs associated with excavation and grading in the unit cost of the Design, Construct Retaining Wall pay item. Reinforced backfill material and backfill material is paid for separately at the contract unit price per cubic yard, Miscellaneous Items.

Pay Item	Measurement Unit
Design, Construct Retaining Wall	Square Yard

47. MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL (REVISED 12-11-15)

A. Description. Furnish all materials, labor, equipment, and additional geotechnical investigation information necessary to design and construct Mechanically Stabilized Earth (MSE) retaining wall(s) with extensible reinforcement in accordance with these specifications and the lines, grades, and dimensions shown on the Plans or otherwise established by the Project Manager. Work includes all excavation and grading required for constructing Mechanically Stabilized Earth (MSE) retaining wall(s). Have a Professional Engineer licensed in Montana oversee the retaining wall design(s) and sign and seal the design calculations and drawings.

B. Preliminary dimensions given on the Plans are for estimating purposes only. Produce a design for an MSE retaining wall system that will establish:

1) Bottom elevation of the leveling pad and bottom elevation of MSE wall.
2) Backfill reinforcement type, locations, and lengths.
3) Type and dimensions of facing materials.
4) Reinforcement connection to facing.
5) Size of concrete leveling pad.
6) Quantity of reinforced backfill.
7) A drainage system that will provide free drainage behind the reinforced soil mass.

C. Available Information. Available information developed by the Department or by the Department's duly authorized representative includes the following items:

1) Project Geotechnical Report dated April 6, 2020.

2) Boring Logs that were obtained in the area of the MSE retaining wall(s) are included in the Special Provisions.

3) Contract Drawings including detailed drawings, plan and profile drawings, and cross-section drawings for the proposed retaining wall. These drawings show right of way and construction limits, utilities, wall appurtenances, and culverts or other existing drainage facilities.

4) Design Soil Properties. Use the following soil properties to design the MSE wall:

	Total Unit Weight, pcf	Drained Angle of Internal Friction, degrees	Undrained Cohesion, psf	Nominal (unfactored) Bearing Capacity, psf(1)
Reinforced Soil	125	34	------	------
Retained Soil	130	30	0	------
Foundation Soil*	120	30	0	9,400

- Note: Nominal bearing capacity is based upon a minimum reinforcement length of 8 feet. Nominal bearing capacity will vary for different reinforcement lengths. Nominal bearing capacity does not include check for local shear failure at facing of MSE wall.

D. MSE Retaining Wall Design Requirements.

1) Design the wall(s) in accordance with the most current AASHTO LRFD Specifications for Highway Bridges including current Interim Specifications Section 11 for retaining walls using the applicable resistance and load factors for mechanically stabilized earth walls. Additionally, follow the guidelines given in the most current editions of the FHWA Manuals titled “Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes – Volume I and II” (Publication No. FHWA-NHI-10-024 and FHWA-NHI-10-025) and “Corrosion/Degradation of Soil Reinforcements for Mechanically Stabilized Earth Walls and Reinforced Soil Slopes” (Publication No. FHWA-NHI-00-044). The following exceptions and additions apply.

2) Use Allowable Stress Design methods (ASD) to assess global stability.

3) The design life of the MSE wall is 75 years.

4) The design Peak Ground Acceleration (PGA) is 0.072g (USGS).

5) The required minimum wall embedment is 4 feet.

6) Ensure internal stability and provide analysis at critical sections that clearly show the Capacity/Demand Ratio equal to or greater than 1.0 for tensile resistance and pullout resistance.

7) The Department or Department’s representative evaluated the proposed wall layout(s) and determined adequate global stability and bearing capacity. The design must include analyses at critical sections that clearly show the Capacity Demand Ratio equal to or greater than 1.0 for compound stability, sliding, eccentricity, and bearing capacity and a Factor of Safety greater than 1.3 for global stability.

8) Design the wall with the maximum vertical distance between reinforcement layers of 2 feet.

9) Design the wall with the minimum length of reinforcement equal to 0.7 times the wall height or 8 feet, whichever is greater.

10) Design the wall to tolerate total and differential settlements of up to 2 inches without damage to the facing, whichever is smaller.

11) Design a drainage system behind the reinforced soil mass to drain water from the backfill and prevent hydrostatic pressure buildup within the reinforced zone.

12) Design the wall with a batter of 0° (plumb) to 3.6° in its final position.

13) Design the wall to account for wall appurtenances and interferences such as pipes, utilities, or other appurtenances behind, passing through, passing under, or adjacent to the wall.

Existing utilities such as fiber optic or telephone are present near the foundation elevation of the MSE wall. Do not disturb these utilities.

14) Design the wall to account for surcharge loading from adjacent highway traffic.

15) Design the wall to account for guardrail placement, fence, signage, luminaires, or other appurtenances at the top of the wall.

E. Materials. Use materials meeting the following requirements to construct the MSE wall.

1) All steel or iron materials permanently incorporated into the work must meet the requirements of Subsection 106.09 of the Specifications.

2) Concrete for Leveling Pads. Provide Class General Concrete for leveling pads meeting the requirements of Section 551.

3) Reinforced Backfill Material. Use material meeting the requirements of these Special Provisions and the following additional requirements:

a) Gradation. Use backfill material meeting the following gradation requirements:

US Sieve Size	Percent Passing
3 inch	100
1 inch	70 – 90
No. 4	20 – 40
No. 40	10 – 20
No. 200	0 – 8

Provide a minimum of 35% of the +No. 4 material with at least one mechanically fractured face.

b) Electrochemical Properties. Use backfill meeting the following electrochemical requirements:

For Steel Reinforcements:

Requirements	Test Methods
Resistivity >3,000 ohm-cm	AASHTO T-288
pH 5-10	AASHTO T-289
Chlorides <100 parts per million	AASHTO T-291
Sulfates <200 parts per million	AASHTO T-290
Organic Content <1%	AASHTO T-267

For Geosynthetic Reinforcements:

Requirements	
Polyester (PET) 3<pH<9	AASHTO T-289
Polyolefin (PP &HDPE) pH>3	AASHTO T-289

If the resistivity is greater than or equal to 5000 ohm-cm, the chloride and sulfates requirements may be waived.

c) Soundness. Use materials that are substantially free of shale or other soft, poor durability particles. Use material having a magnesium sulfate soundness loss of less than 30 percent after four cycles, measured in accordance with AASHTO T-104, or a sodium sulfate less of less than 15 percent after five cycles determined in accordance with AASHTO T-104.

4) Reinforcement Material. Use extensible reinforcement material that will not degrade over the design life of the structure. When specifying the reinforcement material, use the criteria given in the FHWA Publication “Corrosion/Degradation of Soil Reinforcements for

Mechanically Stabilized Earth Walls and Reinforced Soil Slopes" (Publication No. FHWA-NHI-00-044).

5) Facing. Use concrete block units. Provide Class Structure Concrete or approved equal. Provide a sandstone texture or approved equal that extends 1.5 feet below finished grade for all exposed block faces. Submit a block brochure for texture and color selection to the Project Manager.

6) Drainage Aggregate. Use Filter Material meeting Section 701.05.

7) Drainage Pipe. Provide 4 inch (minimum) perforated polyethylene corrugated pipe conforming to AASHTO M 252 – Type SP, with Class 2 perforations.

8) Outlet Pipes and Cleanouts. Provide 4 inch (minimum) non-perforated polyethylene corrugated pipe meeting AASHTO M252 – Type S, for inlet cleanouts and outlet drains.

9) Provide splices, fittings, and connectors that will not impede flow or damage the drainage pipe, and have sufficient strength to withstand construction handling and permanent loading.

10) Provide rodent guards for each drain outlet consisting of steel screen with ½ inch by ½ inch openings and a stainless steel clamp or pre-manufactured guards meeting the opening requirements. Drive one flexible, driveable guidepost at each inlet/outlet drain location.

F. Retaining Wall Design Submittals. At least 20 working days before the planned start of wall excavation, submit complete design calculations and working drawings to the MDT Geotechnical Section for review. Include all details, dimensions, quantities, ground profiles, and cross-sections necessary to construct the wall. Verify the limits of the wall and ground survey data before preparing drawings.

G. Design Calculations. Submit design calculations including, but not limited to, the following items:

1) Applicable code requirements and design references.

2) Retaining wall critical design cross-section geometry including soil/rock strata and location, magnitude, and direction of design slope or external surcharge loads and piezometric levels along with the Capacity Demand Ratios for, long-term conditions.

3) Design parameters including drained and undrained soil/rock shear strengths, unit weights, and any other assumptions for each soil/rock strata along with reinforcing material properties, and facing materials.

4) Capacity Demand Ratios calculated from LRFD.

5) Factor of Safety Calculations (ASD) for global stability.

6) Design calculation sheets with the project number, wall location, stationing, date of preparation, initials of designer and checker, and page number at the top of each page. Provide an index page with the design calculations.

7) Design notes including an explanation of any symbols and computer programs used in the design. Accompany computer output submitted with supporting hand calculations detailing the calculation process.

8) Design calculations for wall facing units, connection pins, and reinforcing material, and connections between the reinforcing material and the facing.

9) Other design calculations.

H. Working Drawings. Provide drawings designed, signed and sealed by a registered Montana licensed Professional Engineer. Working drawings must include, but are not limited to, the following items:

1) A plan view of the wall(s) identifying:

a) A reference baseline and elevation datum.

b) The offset from the construction centerline or baseline to the face of the wall at its base at all changes in horizontal alignment.

c) Beginning and end of wall stations.

d) Right-of-way and permanent or temporary construction easement limits, location of all known active and abandoned existing utilities, adjacent structures or other potential interferences within the limits of the wall excavation.

e) The centerline of any drainage structure or drainage pipe behind, passing through, adjacent to, or passing under the wall.

2) An elevation view of the wall(s) identifying:

a) The elevation at the top of the wall, at all horizontal and vertical break points, and at least every 10 feet along the wall.

b) Elevations at the wall base.

c) Beginning and end of wall stations.

d) The distance along the face of the wall to all steps in the wall base.

e) Wall elevation view showing the location of wall drainage elements along the wall length.

f) Existing and finish grade profiles both behind and in front of the wall.

3) Specifications for reinforcing material and connection pins.

4) General notes for constructing the wall including construction sequencing, wall excavation, foundation preparation, wall erection, backfill placement and any other special construction requirements.

5) Horizontal and vertical curve data affecting the wall and wall control points. Provide match lines or other details to relate wall stationing to centerline stationing.

6) A listing of the summary of quantities on the elevation drawing of each wall showing estimated square yards of wall face areas.

7) Retaining wall typical sections including excavation elevations, and wall face batter.

8) Details, dimensions, and schedules for all connection pins, facing, and reinforcement materials.

9) Details and dimensions for wall appurtenances such as barriers, guardrails, coping, drainage gutters, fences, signage, etc. Clearly show all details and requirements to place guardrail posts.

10) Details for constructing walls around utilities and drainage facilities (if applicable).

11) Details for terminating walls and adjacent slope construction.

Have a Professional Engineer licensed in Montana sign and seal the drawings and calculations. If the retaining wall Contractor uses a Consultant designer subcontractor or manufacturer’s representative to prepare the design, the retaining wall Contractor still has overall contract responsibility for both the design and the construction.

Submit 3 sets of the wall drawings to the Department with the initial submission. The MDT Geotechnical Section will review the Contractor's submittals in accordance with Subsection 105.02. If revisions are necessary, make the necessary corrections and resubmit 3 revised sets. After the drawings have been reviewed and found acceptable, furnish 5 sets of the drawings.

- Do not begin wall construction or incorporate materials into the work until the submittal requirements are satisfied and found acceptable to the Department. Changes or deviations from the accepted submittals must be re-submitted and reviewed.
- No adjustments in contract time will be allowed due to incomplete submittals.
- Revise the drawings when plan dimensions are revised due to field conditions or for other reasons. Within 30 days after completion of the work, submit as-built drawings to the Project Manager. Provide revised design calculations signed by a Montana licensed Professional Engineer for all design changes made during the construction of the wall.

I. Construction Requirements. Construct the wall according to the approved set of working drawings, the special provisions, and the appropriate sections of the Specifications.

1) Reinforced Backfill Source Approval. At least 30 calendar days before beginning MSE wall construction, submit a sample from the proposed borrow source for backfill material.

2) Reinforcement Source Approval. Submit a manufacturer's certificate of compliance signed by an authorized manufacturer's official stating that the reinforcement material meets the requirements specified in the working drawings. Submit a sample at least 5 feet in length by the full reinforcement width for testing. After the sample and the required information have been submitted to the Project Manager, allow 30 calendar days for evaluation. Remove and replace any material not meeting the specified requirements at the Contractor's expense.

3) Have a technical representative of the wall manufacturer on site a minimum of 2 business days during the beginning of MSE wall construction to ensure that the wall is installed properly.

4) Coordinate guardrail placement with wall construction.

5) Excavation. Complete the excavation in conformity to the limits and construction stages shown on the plans. The contractor is responsible for temporary excavation support (as required).

6) Foundation Preparation. Grade the foundation for the structure level for a width equal to the length of reinforcement plus 1 foot or as shown on the plans. Prior to wall construction, except where constructed on rock, compact the foundation soils in accordance with Section 203. The surface should be smooth and level so that any shallow depressions or humps do not exceed 6 inches in depth or height. Compact the subgrade in accordance with MT-219, Control – Strip A and remove and replace any unsuitable foundation soils with backfill material meeting the requirements of this special provision.

7) Concrete Leveling Pad. After placement of the leveling pad concrete, cure the concrete a minimum of 24 hours prior to wall construction.

8) Backfill Placement. Place backfill following each course of facing. Place backfill in a manner that prevents any disturbance of the wall materials or misalignment of the facing or reinforcing elements. Remove and replace any wall materials that become damaged during construction at Contractor's expense.

a) At each reinforcement level, place and compact the backfill to the level of the connection before placing the reinforcement.

b) Place, spread, and compact backfill in a manner that minimizes development of wrinkles in, or movement of, the reinforcement.

c) Place backfill near the facing in a manner that prevents voids directly beneath the reinforcing elements.

d) Place backfill in maximum 8 inch loose lifts. Compact backfill to a minimum of 95 percent of the maximum density as determined by MT-230 within +/- 2 percent of the optimum moisture content.

e) Compact the backfill within 4 feet of the wall face using a lightweight mechanical tamper, roller, or vibratory system.

f) At the end of each day's operation, slope the level of the backfill away from the wall facing to rapidly direct runoff away from the face. Do not allow surface water from adjacent areas to enter the wall construction site.

9) Reinforcement Placement. Place reinforcement on a smooth horizontal surface. Pull the reinforcement material tight before covering it with backfill.

a) If geosynthetic reinforcement is used, place the reinforcement so that the principal strength direction is perpendicular to the wall face. Proper orientation of the reinforcement is critical as the strength of geosynthetic reinforcement varies with direction.

b) Use soil piles, pins, or the manufacturer's approved methods to hold the reinforcement material tight during backfill placement.`

c) Do not operate equipment directly on the reinforcement material. Do not splice or overlap geosynthetic reinforcement in the principal strength direction.

10) Wall Batter. The vertical tolerance of the completed wall must not exceed 2 inches per 10 feet of wall height from the batter shown on the approved set of working drawings.

11) Corrective Action. If any defects are found in the wall, begin repairing the wall by a method or methods approved by the Geotechnical Section. Within 7 calendar days of determining the need for wall repairs, submit 4 copies of revised calculations and working drawings, stamped by the Engineer of Record for the wall design, to the Project Manager for modifications to the wall caused by the remedial action. Furnish all material and labor necessary to correct the wall at no cost to the Department.

J. Method of Measurement. See Special Provision – Design, Construct Retaining Wall.

K. Basis of Payment. See Special Provision – Design, Construct Retaining Wall.

48. GRAVITY RETAINING WALL

A. Description. Furnish all materials, labor, equipment, and additional geotechnical investigation information necessary to design and construct concrete block gravity retaining wall(s) in accordance with these specifications, and to the lines, grades, and dimensions shown on the plans or otherwise established by the Project Manager. Work includes all excavation and grading necessary to construct the gravity retaining wall(s). Have a Montana licensed Professional Engineer oversee the retaining wall design(s) and sign and seal the design calculations and drawings.

B. Preliminary dimensions given on the plans are for estimating purposes only. Produce a design for a gravity retaining wall system that will establish:

1) Bottom elevation of leveling pad of the gravity wall.
2) Backfill type.
3) Number, type, and dimensions of concrete block units.
4) Quantity of backfill.
5) A drainage system that will provide free drainage behind the retaining wall.
6) A design that takes into account interferences such as pipes, utilities, or other appurtenances behind, passing through, passing under, or adjacent to the wall.
7) A design that takes into account guardrail, fence, signage, luminaires, or other appurtenances at the top of the wall.

C. Available Information. Available information developed by the Department or by the Department's duly authorized representative includes the following items:

1) Project Geotechnical Report dated April 6, 2020.
2) Boring Logs obtained in the area of the wall are included in the Special Provisions.
3) Contract Detailed Drawings for the proposed retaining wall(s).
4) Design Soil Properties. Use the following soil properties to design the gravity retaining wall:

	Total Unit Weight, pcf	Drained Angle of Internal Friction, degrees	Undrained Cohesion, psf	Nominal (unfactored) Bearing Capacity, psf[(1)]
Retained Soil	130	30	0	-
Backfill Material	125	34	-	-
Foundation Soil	120	30	0	6,800

- Note: the nominal bearing capacity is based upon a footing width of 4 feet. Nominal bearing capacity will vary for different footing widths. Nominal bearing capacity does not include check for local shear failure.

D. Gravity Retaining Wall Design Requirements.

1) Design the wall(s) in accordance with the most current AASHTO LRFD Specifications for Highway Bridges including current Interim Specifications Section 11 for gravity retaining walls using the applicable resistance and load factors for prefabricated modular walls.

2) Use Allowable Stress Design methods (ASD) to assess global stability.

3) The design life of the gravity wall is 75 years.

4) The design Peak Ground Acceleration (PGA) is 0.072g (USGS).

5) See plans for the required minimum wall embedment.

6) The Department or Department's representative evaluated the proposed wall layout and determined adequate global stability and bearing capacity. The design must include analyses at critical sections that clearly show the Capacity Demand Ratio equal to or greater than 1.0 for sliding, eccentricity, and bearing capacity and a Factor of Safety greater than 1.3 for global stability. Ensure internal stability at each block level. Include the width of the concrete block units from the front face to the back face of the wall in the design computations and show this information on the wall shop drawings.

7) Design the wall(s) to tolerate total and differential settlements of up to 2 inches without damage to the concrete block units or structural integrity of the wall(s).

8) Design a drainage system behind the wall to drain water from the backfill and prevent hydrostatic pressure buildup behind the wall.

9) Design the wall with a batter of 0° (plumb) to 3.6° in its final position.

10) Design the wall to account for wall appurtenances and for interferences as noted in Sections B.6 and B.7 shown above. The outlet pipe of the trench inlet passes through the wall. See Trench Inlet detail.

E. Materials. Use materials meeting the following requirements to construct the wall.

1) Concrete for Leveling Pads. Provide Class General Concrete leveling pads meeting the requirements of Section 551.

2) Concrete Block Unit. Provide Class Structure Concrete or approved equal. Provide a sandstone texture or approved equal that extends 1.5 feet below finished grade for all exposed block faces. Submit a block brochure for texture and color selection to the Project Manager.

3) Backfill Material. Use material meeting the requirements of these Special Provisions and the following additional requirements:

a) Gradation. Use backfill material meeting the following gradation requirements:

US Sieve Size	Percent Passing
3 inch	100
1 inch	70 - 90
No. 4	20 – 40
No. 40	10 – 20
No. 200	0 – 5

Provide a minimum of 35% of the +No. 4 material with at least one mechanically fractured face.

b) Electrochemical Properties. Use backfill meeting the following electrochemical requirements:

Requirements	Test Methods
Resistivity >3,000 ohm-cm	AASHTO T-288
pH 5-10	AASHTO T-289
Chlorides <100 parts per million	AASHTO T-291

Sulfates <200 parts per million	AASHTO T-290
Organic Content <1%	AASHTO T-267

If the resistivity is greater than or equal to 5000 ohm-cm, the chloride and sulfates requirements may be waived.

c) Soundness. Use materials that are substantially free of shale or other soft, poor durability particles. Use material having a magnesium sulfate soundness loss of less than 30 percent after four cycles, measured in accordance with AASHTO T-104, or a sodium sulfate less of less than 15 percent after five cycles determined in accordance with AASHTO T-104.

4) Drainage Aggregate. Use Filter Material meeting Section 701.05.

5) Drainage Pipe. Provide 4 inch (minimum) perforated polyethylene corrugated pipe conforming to AASHTO M 252 – Type SP, with Class 2 perforations.

6) Outlet Pipes and Cleanouts. Provide 4 inch (minimum) non-perforated polyethylene corrugated pipe meeting AASHTO M252 – Type S, for inlet cleanouts and outlet drains.

7) Provide splices, fittings, and connectors that will not impede flow or damage the drainage pipe, and have sufficient strength to withstand construction handling and permanent loading.

8) Provide rodent guards for each drain outlet consisting of steel screen with ½ inch by ½ inch openings and a stainless steel clamp or pre-manufactured guards meeting the opening requirements. Drive one flexible, driveable guidepost at each inlet/outlet drain location.

9) Drainage Geotextile. Cover all joints between blocks on the backside of the wall with Subsurface Drainage Geotextile Filter, High Survivability, Class A, meeting the requirements of Section 716. Wrap drainage aggregate and drainage pipe with drainage geotextile. Overlap geotextile a minimum of 1 foot.

F. Retaining Wall Design Submittals. A minimum of 20 working days before the planned start of wall excavation, submit complete design calculations and working drawings to the Project Manager for review. Include all details, dimensions, quantities, ground profiles, and cross-sections necessary to construct the wall. Verify the limits of the wall and ground survey data before preparing drawings. Include a block brochure for texture and color selection.

G. Design Calculations. Submit design calculations that include, but are not limited to, the following items:

1) Applicable code requirements and design references.

2) Retaining wall critical design cross-section geometry including soil/rock strata and location, magnitude, and direction of design slope or external surcharge loads and piezometric levels along with the Capacity Demand Ratios for end of construction, long-term conditions, and seismic loading.

3) Design parameters including drained and undrained soil/rock shear strengths, unit weights, and any other assumptions for each soil/rock strata along with reinforcing block materials.

4) Show all Capacity Demand Ratios from LRFD.

5) Show all Factors of Safety for global stability analysis.

6) Design calculation sheets with the Design Firm's Project Number, the MDT Project Number, the MDT UPN Number, wall location, stationing, date of preparation, initials of designer and checker, and page number at the top of each page. Provide an index page with the design calculations.

7) Design notes including an explanation of any symbols and computer programs used in the design. Accompany submitted computer output with supporting hand calculations detailing the calculation process.

8) Design calculations for wall block units and connections between the blocks.

9) Other design calculations.

H. Working Drawings. Provide drawings prepared, signed, and sealed by a Montana licensed Professional Engineer. Working drawings must include, but are not limited to, the following items:

1) A plan view of the wall(s) identifying:

a) A reference baseline and elevation datum.

b) The offset from the construction centerline or baseline to the face of the wall at its base at all changes in horizontal alignment.

c) Beginning and end of wall stations.

d) Permanent or temporary construction easement limits, location of all known active and abandoned existing utilities, adjacent structures or other potential interferences within the limits of the wall excavation.

e) The centerline of any pipes, utilities, or other appurtenances behind, passing through, passing under, or adjacent to the wall.

f) The plan view location of guardrail, fence, signage, luminaires, or other appurtenances at the top of the wall.

2) An elevation view of the wall(s) identifying:

a) The elevation at the top of the wall, at all horizontal and vertical break points, and at least every 10 feet along the wall.

b) Elevations at the wall base.

c) Beginning and end of wall stations.

d) The distance along the face of the wall to all steps in the wall base.

e) Wall elevation view showing the location of wall drainage elements along the wall length.

f) Existing and finish grade profiles both behind and in front of the wall.

3) Specifications for block materials and connections.

4) General notes for constructing the wall(s) including construction sequencing, wall excavation, foundation preparation, wall erection, backfill placement and any other special construction requirements.

5) Horizontal and vertical curve data affecting the wall and wall control points. Include match lines or other details to relate wall stationing to centerline stationing.

6) A listing of the summary of quantities on the elevation drawing of each wall showing estimated square yards of wall face areas.

7) Retaining wall typical sections including excavation elevations, wall units, and wall batter.

8) Details, dimensions, and schedules for all block units, connections, and incidentals.

9) Details and dimensions for wall appurtenances such as barriers, guardrails, coping, drainage gutters, fences, signage, etc.

10) Details for constructing walls around utilities and drainage facilities (if applicable).

11) Details for terminating walls and adjacent slope construction.

12) Clearly show all details and requirements to place guardrail posts, fence posts, luminaire foundations, etc.

13) Have a Montana licensed Professional Engineer sign and seal the drawings and calculations. If the retaining wall Contractor uses a Consultant designer subcontractor or manufacturer’s representative to prepare the design, the retaining wall Contractor still has overall contractual responsibility for both the design and the construction.

I. Submittals. Submit 3 sets of the wall drawings to the Department with the initial submission required in Section F. The Department will review the Contractor's submittals within 20 working days after receipt of a complete submission. If revisions are necessary, make the necessary corrections and resubmit 3 revised sets. After the drawings have been reviewed and found acceptable, furnish 5 sets of the drawings.

1) Do not begin wall construction or incorporate materials into the work until the submittal requirements are satisfied and found acceptable to the Department. Changes or deviations from the accepted submittals must be re-submitted and reviewed. No adjustments in contract time will be allowed due to incomplete submittals.

2) Revise the drawings when plan dimensions are revised due to field conditions or for other reasons. Within 30 days after completion of the work, submit as-built drawings to the Project Manager. Provide revised design calculations signed by the Professional Engineer of Record for all design changes made during the construction of the wall.

J. Construction Requirements. Construct the wall according to the approved set of working drawings, the special provisions, and the appropriate sections of the Specifications.

1) Backfill Source Approval. At least 20 working days before beginning wall construction, submit a sample from the proposed borrow source for backfill material.

2) Material Approval. Submit all concrete testing and acceptance results prior to starting field work.

3) Have a technical representative of the wall manufacturer on site during the beginning of wall construction to ensure that the wall is installed properly.

4) Excavation and Grading. Complete the excavation in reasonably close conformity to the limits and construction stages shown on the plans. The contractor is responsible for temporary excavation support as required.

5) Foundation Preparation. Grade the foundation for the structure level for a width equal to the block width plus 1 foot or as shown on the plans. Except for foundations constructed on rock, compact the foundation soils in accordance with Section 203 prior to wall construction.

a) The surface should be smooth and level such that any shallow depressions or humps do not exceed 6 inches in depth or height. Proof-roll the subgrade and remove and replace any unsuitable foundation soils with backfill material meeting the requirements of this special provision.

b) MDT will provide a Geotechnical Section representative on-site to inspect the foundation materials for the wall(s). The Project Manager will notify the MDT Geotechnical Section a minimum of 7 calendar days prior to start of excavation and wall construction to schedule the on-site representative. The Geotechnical Representative will inspect the bottom of the excavation to determine whether foundation material of adequate strength has been reached.

c) Cure leveling pad concrete a minimum of 48 hours prior to concrete block unit placement.

6) Backfill Placement. Place backfill following each course of blocks. Place backfill in a manner that prevents any disturbance of the wall materials or misalignment of the block units. Remove and replace any wall materials that become damaged during construction at Contractor’s expense. Place backfill in maximum 8 inch loose lifts. Compact the backfill to a minimum of 95% of the maximum density determined by MT-230. Compact the backfill within 4 feet of the wall face using a lightweight mechanical tamper, roller, or vibratory system.

7) At the end of each day’s operation, slope the level of the backfill away from the wall facing to rapidly direct runoff away from the face. Do not allow surface water from adjacent areas to enter the wall construction site.

8) Wall Batter. The completed wall has a vertical tolerance of the wall (top to bottom) not exceeding 2 inches per 10 feet of wall height from the batter shown on the approved set of working drawings.

9) Corrective Action. If any defects are found in the wall, begin repairing the wall by a method approved by the Project Manager. Within 7 calendar days of determining the need for wall repairs, submit four copies of calculations and working drawings, stamped by the Professional Engineer of Record, to the Project Manager for modifications to the wall caused by

the remedial action. Furnish all material and labor necessary to correct the wall at no cost to the Department.

K. Method of Measurement. See Special Provision – Design, Construct Retaining Wall.

L. Basis of Payment. See Special Provision – Design, Construct Retaining Wall.

49. CULVERT FOUNDATION TREATMENT (REVISED 12-11-15)

A. Description. Prior to culvert placement, construct the culvert foundation, consisting of culvert excavation, geotextile placement, and foundation material placement at the locations shown in the plans or as directed by the Project Manager.

B. Materials.

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

2) Provide Culvert Foundation Material with a maximum of 15% passing the #200 sieve in addition to the requirements of Subsection 701.04.2.

C. Construction.

1) Excavate a zone as shown elsewhere in the Contract and 2.0 ft below the bottom of the planned bedding elevation.

2) Place geotextile as shown elsewhere in the Contract or as directed by the Project Manager. Overlap any adjoining edges of the geotextile a minimum of 3.0 ft with the edge of the upgrade sheet over the edge of the downgrade sheet.

3) Place the first 16 inches of Foundation Material over the geotextile with minimal compaction effort necessary to create a stable base, with the least amount of equipment traffic possible, and otherwise in accordance with Subsection 622.03.

4) Do not use vibratory, studded, or sheepsfoot rollers on the first 16 inches.

5) Place subsequent lifts in accordance with Subsection 622.03.

D. Method of Measurement.

1) Culvert Foundation Material is measured in accordance with Subsection 603.04.

2) Geotextile is measured in accordance with Subsection 622.04

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) Culvert Foundation Material is paid in accordance with Subsection 603.05

2) Geotextile is paid in accordance with Subsection 622.05.

50. SPECIAL BACKFILL FOR RCB CULVERT (REVISED 12-11-15)

A. Description. Place special backfill at the locations shown on the project plans and cross sections. Place special backfill to the bottom of the crushed aggregate course section.

B. Materials. Provide backfill material 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 2-inch sieve and a maximum of 8% by weight passing the number #200 sieve.

C. Construction. Compact Special Backfill in accordance with Section 203, limiting the lift thickness to 6 inches.

D. Method of Measurement. Special Backfill is measured by the cubic yard in place.

E. Basis of Payment. Special Backfill is paid at the contract unit price per cubic yard complete and in place.

51. IRRIGATION OPERATOR CONTACT/COORDINATION

A. Description. The Garrigus Ditch is a private non-corporate ditch and the following are some of the key users with water rights.

Garrigus Ditch	
John Miller	(406) 328-4131
Richard Bridges	(406) 328-4146
Stan Pelton, Hufford Ranch	(406) 328-4156

B. Materials. Reserved.

C. Construction Requirements. Maintain the supply of irrigation water during irrigation season (approximately April thru October). Do not stop or reduce without prior written permission of the ditch operator(s); provide a copy of the written permission to the Project Manager prior to reduction or stoppage of irrigation water supply. Contact and coordinate timing of construction activities with irrigation operator(s) prior to start of project construction to coordinate timing of construction activities with irrigation operations. Continue contact and coordination during construction as needed to avoid interruption of irrigation services.

D. Method of Measurement. Reserved.

E. Basis of Payment. Include in the cost of the irrigation structure replacement.

52. IRRIGATION SYSTEM RELOCATION/MODIFICATION

A. Description. In accordance with Subsection 104.05.6, accomplish irrigation system relocation/modification during the non-irrigating season or provide temporary facilities to supply water at locations and flows satisfactory to the water user.

B. Materials. Reserved.

C. Construction Requirements. Reserved.

D. Basis of Payment. Cost of these temporary facilities is not measured or paid for separately as the cost thereof is absorbed in related items.

53. TRAFFIC CONTROL – ROAD CLOSURE

A. Description. This work consists of providing traffic control in order to close the present traveled way (PTW)

B. Construction Requirements.

1) Prior to working within the present traveled way (PTW), close the roadway as necessary to replace the Stillwater River Bridge (Johnson Bridge) and Garrigus Ditch crossing to thru traffic. Work outside the PTW, such as limited excavation, clearing & grubbing, vegetation removal and fencing may be performed prior to closing the PTW, at the discretion of the Project Manager.

2) The anticipated alternate routes are the N Stillwater Rd bridge located 2.5 miles east of the Johnson Lane bridge and the Spring Creek Rd bridge located 6 miles west of the Johnson Lane bridge. Notify local emergency services (Sheriff, Fire, Ambulance, etc.) personnel of the closure and anticipated alternate routes prior to closure. Maintain emergency services and local access to either side of the bridge location and box culvert location (Garrigus Ditch crossing) at all times.

3) Submit a traffic control plan for approval to the Project Manager seven days prior to closing the PTW. Provide traffic control meeting the approved traffic control plan, Section 618 and the Manual on Uniform Traffic Control Devices.

C. Measurement and Payment. Include all costs associated with work described in this provision in the Traffic Control – LS bid item.

54. TRAFFIC CONTROL DEVICES – PLASTIC DRUMS [618] (REVISED 1-23-20)

Beginning on April 1, 2021, all plastic drums furnished and installed on Interstate projects must include 6-inch retro-reflective white and retro-reflective fluorescent orange sheeting.

Beginning on April 1, 2022, all plastic drums furnished and installed on all projects must include 6-inch retro-reflective white and retro-reflective fluorescent orange sheeting. All other requirements of Detailed Drawing 618-00 still apply.

END 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, & 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, national origin, ancestry, age, disability mental or physical, political or religious affiliations or ideas, military service or veteran status

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. PARTY will provide notice to its employees and the members of the public that it serves that will include the following:
    i. Statement that PARTY does not discriminate on the grounds of any protected classes.
    ii. Statement that 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 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, 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 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 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. 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 statues 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.

SEEDING SPECIAL PROVISIONS

Project No: STPB 9048(49) Project Name: Stillwater R-2 M NW Absarokee
Project length 0.1 miles CN: 8670000

AREA DESCRIPTIONS

Area 1	Areas with slopes 3:1 and flatter
Area 2	Areas with slopes steeper than 3:1 or inaccessible to drill seed equipment

SOIL HANDLING

Salvage and/or furnish sufficient quantities of topsoil in accordance with Subsection 713.05 and/or 610.03.1 of the Standard Specifications to place 4 inches over all disturbed areas. Place the topsoil in accordance with Subsection 203.03.6 of the Standard Specifications immediately following grading.

SEEDBED PREPARATION REQUIREMENTS

Condition all drill seeded areas immediately prior to seeding.

SEED APPLICATION

	Method	Seeding Depth	Season of Seeding
Area 1	Drill seed	0.25-0.5 in	10/1 - 5/15
Area 2	Dry Broadcast seed	0.25—0.5 in. Scarify the soil to incorporate seed.	10/1 - 5/15

Seeding outside the designated seeding period is allowed only with prior approval from MDT's Reclamation Specialist.

MULCH REQUIREMENTS

Areas 1	None
Area 2	Provide 100% biodegradable erosion control blanket. Acceptable blanket meets Supplemental Specification 713.12(A) – Short Term Blankets. Install the short-term erosion control blanket immediately following broadcast seeding and scarification.

SEED MIXTURES

AREA 1			DRILL SEEDING RATE		
SCIENTIFIC NAME	COMMON NAME	VARIETY	% of Mix	Pounds PLS/acre	PLS/ sq.ft.
Elymus trachycaulus	Slender wheatgrass	Pryor, First Strike or Revenue	10	2.0	6
Elymus lanceolatus spp. riparium	Streambank wheatgrass	Sodar	16	3.0	11
Pascopyrum smithii	Western wheatgrass	Rosana	10	3.0	6
Pseudoroegneria spicata	Bluebunch wheatgrass	Goldar, P7, or Anatone	19	4.0	13
Festuca idahoensis	Idaho fescue	Joseph, Nezpurs or Winchester	16	1.0	10
Nassella viridula	Green needlegrass	Lodorm	19	3.0	13
Ratibida columnifera	Prairie coneflower	Stillwater	10	0.5	7
		GRAND TOTAL	100	16.5	66

AREA 2=AREA 1	BROADCAST SEEDING RATE = 2X DRILL SEEDING RATE

* Use substitute species only if the recommended species is not available and substitution is approved by MDT's Reclamation Specialist

MDT Boring Log Descriptive Terminology

Key to Soil Symbols and Terms

8/16/10

MONTANA 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.

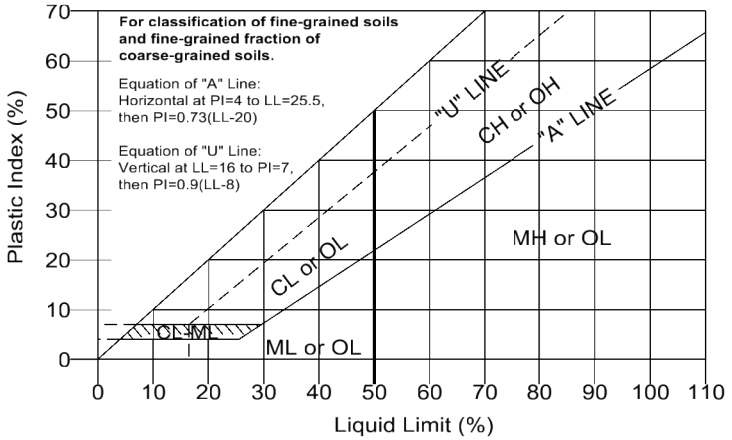
Notes

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)

ADVANCE COPY

MDT Boring Log Descriptive Terminology
Key to Rock Symbols and Terms

8/16/10

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

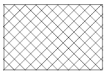

Concrete


Asphalt

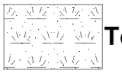

Water


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.

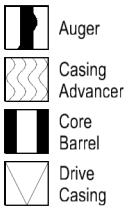
Remarks: Comments on drilling, including method, bit type, and problems encountered.

Unless stated on logs as being surveyed by district survey, all locations are considered approximate.

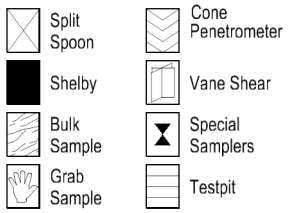
General Notes

- 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:



Sample Types:



Example Rock Log

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

MONTANA MDT DEPARTMENT OF TRANSPORTATION

LOG OF BORING

Boring 8670000-1

Project: Stillwater R - 2 M NW Absarokee		**Rig:** CME 55 **Hammer:** Auto	**Boring Location** N: 466284.91 ft **Coordinates** E: 1976337.907 ft	**Station:** 12 + 39 **Offset:** 11 ft R
Project Number: STPB 9048(48)	**UPN:** 8670000	**Boring Diameter:** 8"	**System:** MT S.P. (E) **Datum:** NAD83	**Ground Elevation:** 4055.849 ft
Date Started: 4/11/17	**Date Finished:** 4/12/17	**Drilling Fluid:** None	**Location Source:** Surveyed	**Elevation Source:** Surveyed
Driller: Boyd **Logger:** Kloberdanz	**Notes:**			**PLS TRS-QQ:** 3S 18E 35 - DB **Abandonment:** Cuttings

Depth (ft) / Elev. (ft)	Operation	Sample Type	Recovery (%)	RQD (%)	Blow Count	Lithology	Material Description	Depth (ft) / Elev. (ft)	MC (%)	LL	PL	-200 (%)	Qu (psi)	DD (pcf)	Remarks and Other Tests
							FILL. Gravel Surfacing.	0.1 4055.7							Hollow stem augers with bullet/finger combination bit.
			25		4 - 3 - 2		Poorly-Graded SAND with silt and gravel (SP-SM), loose to medium dense, moist, brown, fine to coarse grained, rounded, [A-2].		9					
5 4050.8			65		5 - 11 - 30			6.0 4049.8	5			10			
			100		50/0.2ft		Poorly-Graded GRAVEL with sand (GP), dense, moist, brown, fine to coarse grained, subrounded to rounded, [A-1].	7.7 4048.1	7						
							Boulders.	9.0 4046.8							"H" casing advancer with tri-cone roller bit and water.
10 4045.8			0		50/0.2ft		Poorly-Graded GRAVEL with sand (GP), very dense, wet, brown, fine to coarse grained, subrounded to rounded, [A-1].	9.9 4045.9							
							Boulders.	11.5 4044.3							
							Poorly-Graded GRAVEL with silt and sand (GP-GM), dense to very dense, wet, brown, fine to coarse grained, subrounded to rounded, [A-2]. Occasional Cobbles/Boulders.							
15 4040.8			80		11 - 23 - 20							7			
20 4035.8			60		48 - 21 - 50/0.4ft							5			
							Poorly-Graded GRAVEL with sand (GP), medium dense, wet, brown, fine to coarse grained, subrounded to rounded, [A-2]. Occasional Cobbles/Boulders.	22.0 4033.8							
25 4030.8			30		WH - 2 - 12										
							SILT with sand (ML), very stiff to hard, wet, light grey, [A-7].	28.0 4027.8							
30 4025.8			100		9 - 19 - 24					45	29	79			

Water Level Observations		Remarks:
End of Drilling:	During Drilling: 8.0 ft (4047.8 ft) After Drilling:	

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MONTANA MDT DEPARTMENT OF TRANSPORTATION

LOG OF BORING

Boring 8670000-1

Project: Stillwater R - 2 M NW Absarokee		**Rig:** CME 55 **Hammer:** Auto	**Boring Location** N: 466284.91 ft **Coordinates** E: 1976337.907 ft	**Station:** 12 + 39 **Offset:** 11 ft R
Project Number: STPB 9048(48)	**UPN:** 8670000	**Boring Diameter:** 8"	**System:** MT S.P. (E) **Datum:** NAD83	**Ground Elevation:** 4055.849 ft
Date Started: 4/11/17	**Date Finished:** 4/12/17	**Drilling Fluid:** None	**Location Source:** Surveyed	**Elevation Source:** Surveyed
Driller: Boyd **Logger:** Kloberdanz	**Notes:**			**PLS TRS-QQ:** 3S 18E 35 - DB **Abandonment:** Cuttings

Depth (ft) / Elev. (ft)	Operation	Sample Type	Recovery (%)	RQD (%)	Blow Count	Lithology	Material Description	Depth (ft) / Elev. (ft)	MC (%)	LL	PL	-200 (%)	Qu (psi)	DD (pcf)	Remarks and Other Tests
							SILT, continued.								
							CLAYSTONE, grey, very soft field hardness.	33.5 / 4022.3							
35 / 4020.8			100		38 - 50/0.4ft				22						Switched to HQ3 coring with surface set bit and water.
			60	0					19						
							SILTSTONE, greyish brown, soft field hardness.	38.5 / 4017.3							
40 / 4015.8							SHALE, light grey, very soft field hardness. Occasional Coal seams.	39.3 / 4016.5					8958 5150	152 152	
			105	72									10488	156	
45 / 4010.8			100	39			Light grey to grey.								
			78	0											
50 / 4005.8															
			113	74									3013	152	
55 / 4000.8			100	0			Clay seam from 54.8 ft. to 55.1 ft.								
							Soft to medium field hardness.						11979	157	
			107	67									9756	159	
													2013	152	
60 / 3995.8															
			119	86						19	15	77	8470	151	

Water Level Observations		Remarks:
End of Drilling:	During Drilling: 8.0 ft (4047.8 ft) After Drilling:	

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MONTANA MDT DEPARTMENT OF TRANSPORTATION

LOG OF BORING

Boring 8670000-1

Project: Stillwater R - 2 M NW Absarokee		**Rig:** CME 55 **Hammer:** Auto	**Boring Location** N: 466284.91 ft **Coordinates** E: 1976337.907 ft	**Station:** 12 + 39 **Offset:** 11 ft R
Project Number: STPB 9048(48)	**UPN:** 8670000	**Boring Diameter:** 8"	**System:** MT S.P. (E) **Datum:** NAD83	**Ground Elevation:** 4055.849 ft
Date Started: 4/11/17	**Date Finished:** 4/12/17	**Drilling Fluid:** None	**Location Source:** Surveyed	**Elevation Source:** Surveyed
Driller: Boyd **Logger:** Kloberdanz	**Notes:**			**PLS TRS-QQ:** 3S 18E 35 - DB **Abandonment:** Cuttings

Depth (ft) Elev. (ft)	Operation	Sample Type	Recovery (%)	RQD (%)	Blow Count	Lithology	Material Description	Depth (ft) Elev. (ft)	MC (%)	LL	PL	-200 (%)	Qu (psi)	DD (pcf)	Remarks and Other Tests
							SHALE, continued.	63.1 *3992.7*					7511 540	153 151	
65 *3990.8*			106 117	89 17			ASH, white. SANDSTONE, grey, moderately hard field hardness. SHALE, dark grey, soft field hardness.	63.4 *3992.4* 64.6 *3991.2*							
							Boring Depth: 67.0 ft, *Elevation: 3988.8 ft*	67.0 *3988.8*							

Water Level Observations		Remarks:
End of Drilling:	During Drilling: 8.0 ft *(4047.8 ft)* After Drilling:	

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MONTANA MDT DEPARTMENT OF TRANSPORTATION

LOG OF BORING

Boring 8670000-2

Project: Stillwater R - 2 M NW Absarokee		**Rig:** CME 55 **Hammer:** Auto	**Boring Location** N: 466083.125 ft **Coordinates** E: 1976317.211 ft	**Station:** 10 + 37 **Offset:** 10 ft L
Project Number: STPB 9048(48)	**UPN:** 8670000	**Boring Diameter:** 8"	**System:** MT S.P. (E) **Datum:** NAD83	**Ground Elevation:** 4061.852 ft
Date Started: 4/17/17	**Date Finished:** 4/19/17	**Drilling Fluid:** None	**Location Source:** Surveyed	**Elevation Source:** Surveyed
Driller: Boyd **Logger:** Kloberdanz	**Notes:**			**PLS TRS-QQ:** 3S 18E 35 - DB **Abandonment:** Cuttings

Depth (ft) / Elev. (ft)	Operation	Sample Type	Recovery (%)	RQD (%)	Blow Count	Lithology	Material Description	Depth (ft) / Elev. (ft)	MC (%)	LL	PL	-200 (%)	Qu (psi)	DD (pcf)	Remarks and Other Tests
							FILL. Gravel Surfacing.	0.4 *4061.5*							"H" casing advancer with tri-cone roller bit and water.
							Clayey SAND with gravel (SC), medium dense to dense, moist, brown, fine grained, rounded, [A-6].								
			50		3 - 11 - 25				13	31	20	50			
5 *4056.9*			50		16 - 50/0.3ft		Poorly-Graded GRAVEL with silt and sand (GP-GM), dense to very dense, moist, light brown, fine to coarse grained, subrounded, [A-2]. Occasional Cobbles/Boulders. Occasional silty sand with gravel layers.	4.1 *4057.8*	1						
			100		21 - 50/0.4ft				2						
10 *4051.9*			0		50/0.2ft										
			70		14 - 27 - 28		Wet.	▽	11			9			
15 *4046.9*			30		9 - 26 - 18										
20 *4041.9*			70		14 - 29 - 38							6			
							Boulders.	23.0 *4038.9*							
25 *4036.9*			65		38 - 27 - 38		Poorly-Graded GRAVEL with silt and sand (GP-GM), very dense, wet, light brown, fine to coarse grained, subrounded, [A-2].	24.5 *4037.4*							
							Boulders.	27.0 *4034.9*							
							Poorly-Graded GRAVEL with silt and sand (GP-GM), very dense, wet, light brown, fine to coarse grained, subrounded, [A-2].	28.2 *4033.7*							
30 *4031.9*			0		50/0.1ft			29.5 *4032.4*							
							Boulders.								

Water Level Observations

▽ During Drilling: **13.2 ft** ***(4048.7 ft)***

▼ End of Drilling:

▼ After Drilling:

Remarks:

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MONTANA MDT DEPARTMENT OF TRANSPORTATION

LOG OF BORING

Boring 8670000-2

Project: Stillwater R - 2 M NW Absarokee		**Rig:** CME 55 **Hammer:** Auto	**Boring Location** N: 466083.125 ft **Coordinates** E: 1976317.211 ft	**Station:** 10 + 37 **Offset:** 10 ft L
Project Number: STPB 9048(48)	**UPN:** 8670000	**Boring Diameter:** 8"	**System:** MT S.P. (E) **Datum:** NAD83	**Ground Elevation:** 4061.852 ft
Date Started: 4/17/17	**Date Finished:** 4/19/17	**Drilling Fluid:** None	**Location Source:** Surveyed	**Elevation Source:** Surveyed
Driller: Boyd **Logger:** Kloberdanz	**Notes:**			**PLS TRS-QQ:** 3S 18E 35 - DB **Abandonment:** Cuttings

Depth (ft) / Elev. (ft)	Operation	Sample Type	Recovery (%)	RQD (%)	Blow Count	Lithology	Material Description	Depth (ft) / Elev. (ft)	MC (%)	LL	PL	-200 (%)	Qu (psi)	DD (pcf)	Remarks and Other Tests
35 4026.9			0		50/0.0ft		Poorly-Graded GRAVEL with silt and sand (GP-GM), very dense, wet, light brown, fine to coarse grained, subrounded, [A-2]. Occasional Cobbles/Boulders. Occasional silty sand with gravel layers.	31.0 4030.9							
40 4021.9			100		14 - 48 - 50/0.3ft		SILT with sand (ML), stiff, wet, tan, [A-6]. Occasional gravel clast.	39.0 4022.9							
							CLAYSTONE, brown, very soft field hardness.	40.5 4021.4	18	38	28				
45 4016.9			100		44 - 50/0.3ft		Interbedded SANDSTONE, grey, very soft to medium field hardness. With interbedded claystone layers.	44.4 4017.5	22				94	124	Switched to HQ3 coring with sawtooth carbide bit and water.
			106	54					2				26	110	
50 4011.9													6876	159	
			105	75					8				10790	153	
													10021	151	
							SHALE, black to dark grey, very soft field hardness.	52.9 4009.0							
55 4006.9			154	58			CLAYSTONE, light grey, very soft field hardness. Occasional sandstone layers.	53.7 4008.2		33	20		10561		
													13842		
			113	63											
60 4001.9							SANDSTONE, light grey, soft to medium field hardness.	58.5 4003.4					8516	164	
							Clay seams.						11615	156	
			122	64						24	17		8851	158	
													9880	157	

Water Level Observations		Remarks:
End of Drilling:	During Drilling: 13.2 ft *(4048.7 ft)* After Drilling:	

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MONTANA MDT DEPARTMENT OF TRANSPORTATION

LOG OF BORING

Boring 8670000-2

Project: Stillwater R - 2 M NW Absarokee		**Rig:** CME 55 **Hammer:** Auto	**Boring Location** N: 466083.125 ft **Coordinates** E: 1976317.211 ft	**Station:** 10 + 37 **Offset:** 10 ft L
Project Number: STPB 9048(48)	**UPN:** 8670000	**Boring Diameter:** 8"	**System:** MT S.P. (E) **Datum:** NAD83	**Ground Elevation:** 4061.852 ft
Date Started: 4/17/17	**Date Finished:** 4/19/17	**Drilling Fluid:** None	**Location Source:** Surveyed	**Elevation Source:** Surveyed
Driller: Boyd **Logger:** Kloberdanz	**Notes:**			**PLS TRS-QQ:** 3S 18E 35 - DB **Abandonment:** Cuttings

Depth (ft) Elev. (ft)	Operation	Sample Type	Recovery (%)	RQD (%)	Blow Count	Lithology	Material Description	Depth (ft) Elev. (ft)	MC (%)	LL	PL	-200 (%)	Qu (psi)	DD (pcf)	Remarks and Other Tests
							SANDSTONE, continued. Shale seam.	62.5 3999.4					4128	156	
			96	88										163	
							CLAYSTONE, light grey, very soft field hardness.	64.6 3997.3						158	
65 3996.9			49	0			SHALE, dark grey, very soft field hardness.								
							Sandy CLAYSTONE, light grey, medium field hardness.	66.3 3995.6					3342	154	
			119	73									6202	159	
													11405	159	
70 3991.9							Shale seam.								
							SHALE, dark grey to light grey, soft to medium field hardness.	70.3 3991.6							
			97	72									6432	155	
													3822	153	
								74.5 3987.4					610	135	

Boring Depth: 74.5 ft, *Elevation: 3987.4 ft*

Water Level Observations		
End of Drilling:	During Drilling: **13.2 ft** ***(4048.7 ft)***	Remarks:
	After Drilling:	

(2) MDT LOG OF BORING - MDT_2016+WELL_V1.GDT - 3/6/20 16:22 - L:\PROJECTS\2016+PROJECTS\8670000.GPJ

STANDARD PROVISIONS INDEX

FEDERAL AID PROJECTS CONTAINS

Federal Wage Rates (Rev. 1-3-2020)..... 9 Pages

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

Required Contract Provisions Federal-Aid Const. Contracts (FORM FHWA-1273) [Rev.5-1-2012]..... 12 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: MT20200079 01/03/2020

MT79 Superseded General Decision Number:

MT20190079 State: Montana

Construction Type: Highway

Counties: Montana Statewide.

HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.80 for calendar year 2020 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, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.80 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 calendar year 2020. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at ww.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2020

* SUMT2014-001 02/19/2014

	Rates	Fringes
CARPENTER		
Carpenter/Piledriverman....	$ 29.00	11.82
Millwright.....	$ 32.00	11.82

Zone 1: 0 to 25 miles - Free
Zone 2: 25 to 50 miles - Base Pay +$2.50
Zone 3: Over 50 miles - Base Pay +$3.00

The Carpenter zone hourly rate applicable to each project shall be determined by measuring the road miles over the shortest practical maintained route from the County Courthouse of the following cities to the center of the job: Billings, Bozeman, Butte, Great Falls, Helena, Missoula, Kalispell

The agency shall calculate the mileage and include it in the special provisions of the bid documents and awarded contract.

CEMENT MASON/CONCRETE FINISHER...$ 24.87 10.80

Zone 1: 0 to 25 miles - Free
Zone 2: 25 to 50 miles - Base + $2.50
Zone 3: Over 50 miles -Base + $3.00

The Cement Mason/Concrete Finisher zone hourly rate applicable to each project shall be determined by measuring the road miles over the shortest practical maintained route from the County Courthouse of the following cities to the center of the job: Billings, Bozeman, Butte, Great Falls, Helena, Missoula, Kalispell

The agency shall calculate the mileage and include it in the special provisions of the bid documents and awarded contract

DIVER

Diver Tender.....$ 37.16 14.52
Diving.....$ 76.32 14.52
Stand-By.....$ 38.16 14.52

The tender shall receive 2 hours at the straight time pay rate per shift for dressing and/or undressing a Diver 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.

DIVER ZONE PAY:

The hourly wage rates applicable to each project shall be determined by measuring the road miles over the shortest practical maintained route from the County Court House of the following cities only to the center of the job: Billings, Bozeman, Butte, Great Falls, Helena, Kalispell, Missoula

Zone 1: 0 to 25 miles - Free
Zone 2: 25 to 50 miles - Base Pay +$2.50
Zone 3: Over 50 miles - Base Pay +$3.00

The agency shall calculate the mileage and include it in the special provisions of the bid documents and awarded contract

ELECTRICIAN (LINE CONSTRUCTION)

Equipment Operator.....$ 33.27 14.16
Groundman.....$ 25.98 13.25
Lineman.....$ 43.43 15.38

TRAVEL PAY:

$50.00 per day - 0-25 Miles from the County Courthouse of the following cities: Billings, Bozeman, Butte, Great Falls, Helena, Kalispell and Missoula

$60.00 per day - Over 25 Miles

The agency shall calculate the mileage and include it in the special provisions of the bid documents and awarded contract

ELECTRICIAN

All Areas.....$ 32.74 13.42

TRAVEL PAY:

Zone 1: 0 to 10 miles – Free
Zone 2: 10 to 60 miles - Federal mileage both ways/day
Zone 3: Over 60 miles - $75.00 per day

The Electrician zone hourly rate applicable to each project shall be determined by measuring the road miles over the shortest practical maintained route from the County Courthouse of the following cities to the center of the job: Billings, Bozeman, Butte, Great Falls, Helena, Kalispell, Missoula

The agency shall calculate the mileage and include it in the special provisions of the bid documents and awarded contract

IRONWORKER.....$ 27.25 20.98

TRAVEL PAY:

0 to 45 miles - Free
45-85 miles - $55.00 per day
Over 85 miles - $85.00 per day

The Ironworker zone hourly rate applicable to each project shall be determined by measuring the road miles over the shortest practical maintained route from the County Courthouse of the following cities to the center of the job: Billings, Bozeman, Butte, Great Falls, Helena, Kalispell, Missoula

Zone 1: 0 to 25 miles - Free
Zone 2: 25 to 50 miles - Base + $2.50
Zone 3: Over 50 miles - Base + $3.00

The agency shall calculate the mileage and include it in the special provisions of the bid documents and awarded contract

LABORER

Group 1.....$ 20.90 9.60
Group 2.....$ 23.97 9.60
Group 3.....$ 24.19 9.60
Group 4.....$ 25.18 9.60

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; Rip rapper; Sealants for Concrete and other materials; Sign Erection, Guard Rail and Jersey Rail; Stake Jumper; Spike Driver; Signalman; Tail Hose man; 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

LABORERS ZONE PAY:

The hourly wage rates applicable to each project shall be determined by measuring the road miles over the shortest practical maintained route from the County Court House of the following cities only to the center of the job: Billings, Bozeman, Butte, Great Falls, Helena, Kalispell, Missoula

Zone 1: 0 to 25 miles - Free
Zone 2: 25 to 50 miles - Base Pay +$2.50
Zone 3: Over 50 miles - Base Pay +$3.00

The agency shall calculate the mileage and include it in the special provisions of the bid documents and awarded contract

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) .....$ 28.00 10.30

PAINTER ZONE PAY:

The hourly wage rates applicable to each project shall be determined by measuring the road miles over the shortest practical maintained route from the County Court House of the following cities only to the center of the job: Billings, Bozeman, Butte, Great Falls, Helena, Kalispell, Missoula

ZONE 1: 0 to 25 miles - Free
ZONE 2: 25 to 50 miles - Base Pay +$2.50
ZONE 3: Over 50 miles - Base Pay +$3.00

The agency shall calculate the mileage and include it in the special provisions of the bid documents and awarded contract.

POWER EQUIPMENT OPERATOR:

Group 1.....	$ 26.52	10.40
Group 2.....	$ 28.55	10.40
Group 3.....	$ 29.41	10.40
Group 4.....	$ 30.10	10.40
Group 5.....	$ 31.44	10.40
Group 6.....	$ 32.13	10.40
Group 7.....	$ 34.23	10.40

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; Pump man

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)

POWER EQUIPMENT OPERATOR ZONE PAY:

The hourly wage rates applicable to each project shall be determined by measuring the road miles over the shortest practical maintained route from the County Court House of the following cities only to the center of the job: Billings, Bozeman, Butte, Great Falls, Helena, Kalispell, Missoula

Zone 1: 0 to 25 miles - Free
Zone 2: 25 to 50 miles - Base Pay +$2.50
Zone 3: Over 50 miles - Base Pay +$3.00

The agency shall calculate the mileage and include it in the special provisions of the bid documents and awarded contract

TRUCK DRIVER

Group 1.....$ 22.39 10.16
Group 2.....$ 28.06 10.16

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

TRUCK DRIVER ZONE PAY:

The hourly wage rates applicable to each project shall be determined by measuring the road miles over the shortest practical maintained route from the County Court House of the following cities only to the center of the job: Billings, Bozeman, Butte, Great Falls, Helena, Kalispell, Missoula

Zone 1: 0 To 25 Miles - Free
Zone 2: 25 To 50 Miles - Base Pay +$2.50
Zone 3: Over 50 Miles - Base Pay +$3.00

The agency shall calculate the mileage and include it in the special provisions of the bid documents and awarded contract

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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 www.dol.gov/whd/govcontracts.

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 Regional Office for the area in which the survey was conducted because those Regional Offices have 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 09-17-20

"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 May 1, 2012

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination
III. Nonsegregated 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. Compliance with Governmentwide Suspension and Debarment Requirements
XI. Certification Regarding Use of Contract Funds for Lobbying

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 (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).

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.

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). 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 bid proposal or request for proposal 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).

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.

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. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 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 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, 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 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, 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 230, 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 (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 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 35 and 29 CFR 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.

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, 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 who 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.

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, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure 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. 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, 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, 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 there under. 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, 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 and 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. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor 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 contracting agency deems appropriate.

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 $10,000 or more.

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, 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). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

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

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, Employment Standards Administration, 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 Wage and Hour Administrator for determination. The Wage and Hour 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

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

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 at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor 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 §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, 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 Regulations, 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 section 1001 of title 18 and section 231 of title 31 of the United States Code.

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

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. 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.

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.

9. Disputes concerning labor standards. 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.

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

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.

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 of $10 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.

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.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (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.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

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

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” 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:

(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.

2. 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. 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.

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

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 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.

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 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).

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 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 1, 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

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

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

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.

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.

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.

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.

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 and 1200. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee 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 grantee or subgrantee 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.

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.

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. 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 Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

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. 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) 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;

(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; 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.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. **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)

a. By signing and submitting this proposal, the prospective lower tier 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.

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 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 grantee or subgrantee 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 grantee or subgrantee 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.

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.

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 Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

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.

* * * * *

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 is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall 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 20).

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.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

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.