
INVITATION FOR BIDS

Solicitation No. DTFH70-08-B-00006

Bid Opening Date:

See Page A-3, Block 13A

**MT OMAD 18(41)
MINUTEMAN MISSILE BASE ROADS**

QUICK INDEX

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A-1 Notice to Bidders

BID REMINDERS

Electronic bids will not be accepted. Submit printed copy of bid to the address listed on the enclosed SF 1442. Before submitting your bid, please review the following:

- Have you rechecked your bid figures?
- Have you completed the bid schedule?
- Have you completed and signed the SF 1442, Solicitation, Offer & Award?
- Have you acknowledged all amendments?
- Have you completed the Representations & Certifications (Page B-1)?
- Is your bid guarantee enclosed in proper form and amount (see FAR Clause 52.228-1), including Power of Attorney affidavit?
- Does the lower left corner of the proposal envelope state "Bid Enclosed"?
- Does the lower left corner include the Solicitation Number and the project number/name?

**Solicitation, Offer & Award, Bid Schedule, Contract Clauses,
Minimum Wage Schedule, Special Contract Requirements, and Plans**

ISSUING OFFICE:



**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
610 EAST FIFTH STREET
VANCOUVER, WA 98661-3801**
Phone: (360) 619-7520 – FAX: (360) 619-7932
Web site: www.wfl.fhwa.dot.gov/edi/
e-mail: contracts@mail.wfl.fhwa.dot.gov

PROJECT NAME

**MT OMAD 18(41)
MINUTEMAN MISSILE BASE ROADS**

SCHEDULES:

	BASE	OPTION A	OPTION B	OPTION C
	E-02 L-02 M-06 O-11	E-11	L-05	E-09 N-09
LENGTH:	8.2 MILES	4.5 MILES	7.1 MILES	0.6 MILES

COUNTIES

FERGUS AND WHEATLAND

STATE

MONTANA

FIXED COMPLETION DATE

See FAR Clause 52.211-10
(FAR Clauses begin on page C-1)

Bid Submittal Checklist

Before submitting your bid, please review the following:	Done?	Is this in the envelope?
Bid Envelope		
Did I correctly address the envelope? (See page A-3, blocks 7 & 8)		
Does the lower left corner of the envelope include the Solicitation Number and the project name/number?		
Pages A-3 & A-4 (SF 1442, Solicitation Offer & Award)		
Did I include our firm name and address in block 14?		
Did I include our firm's phone number in block 15?		
Did I include our firm's remittance address in block 16? (Use when different than block 14)		
Did I include my DUNS number?		
Did I include the number & date of <u>all</u> amendments in block 19?		
Did the appropriate official sign/date in block 20A, 20B & 20C?		
Bid Schedule (see page A-7)		
Did I insert "Unit Bid Price" and "Amount Bid" for each bid item?		
Did the appropriate official initial corrections?		
Did I include the "Total" on the last page of each bid schedule?		
Did I include the firm's name on the last page of each bid schedule?		
When applicable, did I include the totals for each schedule in the summary page? (see last page of bid schedules.)		
Bid Bond (Standard Form 24)		
Bids received without a valid bid bond will be rejected.		
Did I complete my bid bond correctly?		
Did I attach the Power of Attorney to the bid bond?		
Authority to Sign		
Did I include a completed form for <u>each</u> person signing the SF1442 and Bid Bond?		
Representations & Certifications & other fill-ins		
Did I include the completed B-pages (beginning on B-1)?		
Did I include the completed clause <i>1252.228-73 Notification of Miller Act Payment Bond Protection</i> (clauses begin on page C-1)?		
Online Representations & Certifications Application (ORCA) http://orca.bpn.gov		
Do we have up-to-date data in ORCA ?		
Central Contractor Registration (CCR) http://www.ccr.gov		
Did I ensure our firm is currently registered in CCR?		
Vets100 Reporting http://vets.dol.gov/vets100/		
Did I ensure our firm has completed this annual report?		

NOTE: The Contractor is fully responsible to verify that all data is correct each time a bid package is submitted. Failure to properly input and/or update your data may cause the bid to be rejected.

Bid Submittal Checklist

Map – Bid Opening Location:

For a map of the Montana Division Office click on [Area Info](#) at:

<http://www.fhwa.dot.gov/mtdiv/index.htm>

INSTRUCTIONS: When the offeror/principal is a corporation, include this certification with your offer/bid.

Corporate Certificate

I, _____ (name), certify that I am the

_____ (title), of the corporation named as

the Offeror/Principal herein;

that _____ (name), who signed this

offer and/or bid bond on behalf of _____ (company name) is

_____ (title) of this corporation;

that the offer was duly signed for and on behalf of said corporation by authority and

scope of its governing body, and within the scope of its corporate powers.

_____ (signature)

Affix Corporate Seal

_____ (title)

INSTRUCTIONS: When the offeror/principal is a limited liability company, include this certification with your offer/bid.

Limited Liability Certificate

I, _____ (name), certify that I am the
_____(title), of the limited liability company

named as the Offeror/Principal herein;

that _____(name), who signed this

offer and/or bid bond on behalf of _____ (company name) is

_____(title) of this company;

that the offer was duly signed for and on behalf of said company by authority and

scope of its governing body, and within the scope of its powers.

_____(signature)

_____(title)

Affix Company Seal
(as applicable)

Authority to Sign
MT OMAD 18(41), Minuteman Missile Base Roads

INSTRUCTIONS: When the offeror/principal is a partnership, include this certification with your offer/bid.

Authority to Bind Partnership

This certifies that the names and signatures of all partners are listed below, and that the person signing the proposal has the authority to actually bind the partnership pursuant to its partnership agreement. Each of the partners individually has full authority to enter into and execute contractual instruments on behalf of said partnership, except as follows:

(State "None" or describe limitations, if any)

This authority shall remain in full force and effect until such time as the revocation of authority by any cause whatsoever has been furnished in writing to and acknowledge by the Contracting Officer.

(Include names and signatures of all partners)

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Authority to Sign
MT OMAD 18(41), Minuteman Missile Base Roads

INSTRUCTIONS: When the offeror/principal is a joint venture, include this certification with your offer/bid.

Authority to Bind Joint Venture

This certifies that the person signing the proposal has the authority to actually bind the joint venture pursuant to its joint venture agreement, and that each of the named persons listed below individually has full authority to enter into and execute contractual instruments on behalf of said joint venture, except as follows:

(State "None" or describe limitations, if any)

This authority shall remain in full force and effect until such time as the revocation of authority by any cause whatsoever has been furnished in writing to and acknowledge by the Contracting Officer.

(Include names and signatures of all applicable individuals)

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Authority to Sign
MT OMAD 18(41), Minuteman Missile Base Roads

INSTRUCTIONS: When the offeror/principal is a sole proprietorship, the signature on the offer/bid and on the bonds must be as follows:

Sole Proprietorship Requirement

An Offeror/Principal that is a sole proprietorship must submit an offer/bid and a bond signed by the sole proprietor, or by one duly authorized to sign for the sole proprietor. If the signature is by someone other than the sole proprietor, a copy of the power of attorney authorizing the individual to sign must be provided with the offer/bid.

BID BOND <i>(See instruction on reverse)</i>	DATE BOND EXECUTED <i>(Must not be later than bid opening date)</i>	OMB NO.: 9000-0045
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Public reporting burden for this collection of information is estimated to average 25 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the FAR Secretariat (MVR), Federal Acquisition Policy Division, GSA, Washington, DC 20405.

PRINCIPAL <i>(Legal name and business address)</i>	TYPE OF ORGANIZATION <i>("X" one)</i> <input type="checkbox"/> INDIVIDUAL <input type="checkbox"/> PARTNERSHIP <input type="checkbox"/> JOINT VENTURE <input type="checkbox"/> CORPORATION STATE OF INCORPORATION
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SURETY(IES) *(Name and business address)*

PENAL SUM OF BOND					BID IDENTIFICATION	
PERCENT OF BID PRICE	AMOUNT NOT TO EXCEED				BID DATE	INVITATION NO.
	MILLION(S)	THOUSAND(S)	HUNDRED(S)	CENTS		FOR <i>(Construction, Supplies, or Services)</i>

OBLIGATION:

We, the Principal and Surety(ies) are firmly bound to the United States of America (hereinafter called the Government) in the above penal sum. For payment of the penal sum, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally. However, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us. For all other purposes, each Surety binds itself, jointly and severally with the Principal, for the payment of the sum shown opposite the name of the Surety. If no limit of liability is indicated, the limit of liability is the full amount of the penal sum.

CONDITIONS:

The Principal has submitted the bid identified above.

THEREFORE:

The above obligation is void if the Principal - (a) upon acceptance by the Government of the bid identified above, within the period specified therein for acceptance (sixty (60) days if no period is specified), executes the further contractual documents and gives the bond(s) required by the terms of the bid as accepted within the time specified (ten (10) days if no period is specified) after receipt of the forms by the principal; or (b) in the event of failure to execute such further contractual documents and give such bonds, pays the Government for any cost of procuring the work which exceeds the amount of the bid.

Each Surety executing this instrument agrees that its obligation is not impaired by any extension(s) of the time for acceptance of the bid that the Principal may grant to the Government. Notice to the surety(ies) of extension(s) are waived. However, waiver of the notice applies only to extensions aggregating not more than sixty (60) calendar days in addition to the period originally allowed for acceptance of the bid.

WITNESS:

The Principal and Surety(ies) executed this bid bond and affixed their seals on the above date.

PRINCIPAL				
SIGNATURE(S)	1.	2.	3.	<i>Corporate Seal</i>
	<i>(Seal)</i>	<i>(Seal)</i>	<i>(Seal)</i>	
NAME(S) & TITLE(S) <i>(Typed)</i>	1.	2.	3.	

INDIVIDUAL SURETY(IES)		
SIGNATURE(S)	1.	2.
	<i>(Seal)</i>	<i>(Seal)</i>
NAME(S) <i>(Typed)</i>	1.	2.

CORPORATE SURETY(IES)				
SURETY A	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT (\$)
	SIGNATURE(S)	1.	2.	<i>Corporate Seal</i>
	NAME(S) & TITLE(S) <i>(Typed)</i>	1.	2.	

SURETY B	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT (\$)	<i>Corporate Seal</i>
	SIGNATURE(S)	1.	2.		
	NAME(S) & TITLE(S) <i>(Typed)</i>	1.	2.		
SURETY C	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT (\$)	<i>Corporate Seal</i>
	SIGNATURE(S)	1.	2.		
	NAME(S) & TITLE(S) <i>(Typed)</i>	1.	2.		
SURETY D	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT (\$)	<i>Corporate Seal</i>
	SIGNATURE(S)	1.	2.		
	NAME(S) & TITLE(S) <i>(Typed)</i>	1.	2.		
SURETY E	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT (\$)	<i>Corporate Seal</i>
	SIGNATURE(S)	1.	2.		
	NAME(S) & TITLE(S) <i>(Typed)</i>	1.	2.		
SURETY F	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT (\$)	<i>Corporate Seal</i>
	SIGNATURE(S)	1.	2.		
	NAME(S) & TITLE(S) <i>(Typed)</i>	1.	2.		
SURETY G	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT (\$)	<i>Corporate Seal</i>
	SIGNATURE(S)	1.	2.		
	NAME(S) & TITLE(S) <i>(Typed)</i>	1.	2.		

INSTRUCTIONS

1. This form is authorized for use when a bid guaranty is required. Any deviation from this form will require the written approval of the Administrator of General Services.
2. Insert the full legal name and business address of the Principal in the space designated "Principal" on the face of the form. An authorized person shall sign the bond. Any person signing in a representative capacity (e.g., an attorney-in-fact) must furnish evidence of authority if that representative is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved.
3. The bond may express penal sum as a percentage of the bid price. In these cases, the bond may state a maximum dollar limitation (e.g., (e.g., 20% of the bid price but the amount not to exceed _____ dollars).
4. (a) Corporations executing the bond as sureties must appear on the Department of the Treasury's list of approved sureties and must act within the limitation listed therein. where more than one corporate surety is involved, their names and addresses shall appear in the spaces (Surety A, Surety B, etc.) headed "CORPORATE SURETY(IES)." In the space designed "SURETY(IES)" on the face of the form, insert only the letter identification of the sureties.

(b) Where individual sureties are involved, a completed Affidavit of Individual surety (Standard Form 28), for each individual surety, shall accompany the bond. The Government may require the surety to furnish additional substantiating information concerning its financial capability.
5. Corporations executing the bond shall affix their corporate seals. Individuals shall execute the bond opposite the word "Corporate Seal"; and shall affix an adhesive seal if executed in Maine, New Hampshire, or any other jurisdiction requiring adhesive seals.
6. Type the name and title of each person signing this bond in the space provided.
7. In its application to negotiated contracts, the terms "bid" and "bidder" shall include "proposal" and "offeror."

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SPECIAL CONTRACT REQUIREMENTS (SCRs)	
The following Special Contract Requirements amend and supplement the Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects, FP-03 U.S. Customary Units.	
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NOTICE TO BIDDERS

I. Project Location.

The project work is located in Fergus and Wheatland Counties.

Signs have not been erected to show the beginning and end of each road.

No Government personnel will be available for show-me tours.

II. Pre-bid Information.

TECHNICAL QUESTIONS REGARDING PROPOSED WORK FOR THIS PROJECT WILL NOT BE ACCEPTED AFTER THE CLOSE-OF-BUSINESS ON MAY 2, 2008.

Questions can be submitted and answers viewed by going to project information at

<http://www.wfl.fha.dot.gov/edi/current.htm>

This solicitation includes electronic plan sheets. Plan sheets can be found at <http://www.wfl.fhwa.dot.gov/edi/plans/omad1841/> and viewed by individual sections, downloaded by individual sections, or the entire plan set downloaded in a zip file. A paper copy of the plan sheets is available by submitting the form included in this solicitation.

Requests for technical information (Plan and Division 100 – 700 Specification questions only) about this project will only be accepted in writing (see Block 9 on page A-5).

If the contract is awarded after applying the price preference for HUBZone small business concerns under FAR clause 52.219-4; at least 50 percent of the cost of the contract performance incurred for personnel must be spent on the prime Contractor's employees or the employees of other qualified HUBZone small business concerns. See Subsection 108.02A.

This solicitation and subsequent contract are governed by the Federal Acquisition Regulation (FAR), and agency supplemental regulations.

REPS & CERTS - Submit or update Representations and Certifications online at <http://orca.bpn.gov> prior to bid submittal. For more details go to FAR Provision 52.204-8 *Annual Representations and Certifications* (see page B-2). If you have previously registered on-line and the NAICS code for this solicitation is different than the code listed in your online file, please note the amended changes on the lines provided in FAR 52.204-8.

Notice of CCR Registration. You must register in the Central Contract Registration (CCR) prior to award of this contract. Failure to register prior to contract award will require award to be offered to the next successful registered Offeror. See FAR Subpart 4.1103(c). Register online at www.ccr.gov or call toll free: 888.227.2423.

This solicitation contains a Price Evaluation Factor. We will apply a factor of 10% to an apparent low bid submitted by a large business when we also receive a bid from a HUBZone small business; the 10% factor does not apply to apparent low bids submitted by a small business. See FAR Clause

Notice to Bidders

Project: MT OMAD 18(41), Minuteman Missile Base Roads

52.219-4. To verify which firms are currently HUBZone certified see: <https://eweb1.sba.gov/hubzone/internet/general/approved-firms.cfm>.

Bids for the construction of this project are being invited under a Base Schedule and three options, Option A, Option B, and Option C. Complete the base schedule and all options according to Subsection 102.02. Award of contract will be made according to Subsection 102.05A. The apparent low bidder will be determined by the lowest bid for the total of Base, Option A, Option B, and Option C schedules. The successful bidder will be awarded all items in the Base schedule and may be awarded Option A, Option B, Option C, or all schedules.

Particular attention should be paid to Standard Form 1442, Solicitation, Offer and Award, to assure that Blocks 14, 15, 16, 19, 20A, and 20C are completed correctly. Sign Block 20B according to the instructions in Subsection 102.02. You must submit a completed 'Authority to Sign' document (see 'Bidder's' packet). You must also complete the representations and certifications contained in the Contract Provisions beginning on page B-1. Failure to furnish or complete any of the above may result in your bid being considered nonresponsive and being rejected.

Facsimile bids are not authorized for this solicitation. Bids may be modified or withdrawn by facsimile, if such notice is received by the time specified for receipt of bids. The Government will not be responsible for any failure attributable to the transmission or receipt of facsimile data. See FAR Provision 52.214-5, Submission of Bids. FAX 360.619.7932.

III. Post Award Information.

Insurance requirements are set forth in Subsection 107.05.

Secure all permits and clearances for off-project work, including but not limited to, material sources, waste areas, haul roads, and staging areas. See Subsections 105.02(b) and 107.10. Subsection 107.10 was revised substantially in December 2005.

Contractor Performance Evaluations. FHWA is now posting evaluations in the National Institutes of Health's Contractor Performance System (CPS) for completed projects. Register at <https://cps.nih.gov/infopage.asp> (Click on "CPS Info" tab, then click on "Contractor Information" button) to view and comment on evaluations. System registration is only required once. Review the evaluation and submit comments within 30 days of notification. Reviewing the evaluation and submitting comments is limited to one entry. If unable to register, call 360.619.7520 for assistance or a copy of the evaluation. You can also access the Contractor User Manual from this web link.

Notice to Bidders

Project: MT OMAD 18(41), Minuteman Missile Base Roads

SOLICITATION, OFFER, AND AWARD <i>(Construction, Alteration, or Repair)</i>	1. Solicitation No. DTFH70-08-B-00006	2. Type of Solicitation <input checked="" type="checkbox"/> Sealed Bid (IFB) <input type="checkbox"/> Negotiated (RFP)	3. Date Issued April 7, 2008	Page A-3
	IMPORTANT – The "offer" section on the reverse must be fully completed by offeror.			
4. Contract No. MT OMAD 18(41)	5. Requisition/Purchase Request No. N/A	6. Project No. MT OMAD 18(41) Minuteman Missile Base Roads		
7. Issued By U.S. Department of Transportation Federal Highway Administration 610 East Fifth Street Vancouver WA 98661-3801	Code: N/A	8. Address Offer to Attn: Julee McTaggart Federal Highway Administration 585 Shepard Way Helena, MT 59601	Code: N/A	
9. For Information Call:	A. Name See page A-5.	B. Telephone No. <i>(Include area code) (No Collect Calls)</i> 360.619.7520		
SOLICITATION				
NOTE: In sealed bid solicitation "offer" and "offeror" mean "bid" and "bidder"				

10. THE GOVERNMENT REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS: *(Title, Identifying No., Date)*

This solicitation is designated MT OMAD 18(41), Minuteman Missile Base Roads, Fergus and Wheatland Counties, Montana

IN STRICT ACCORDANCE WITH:

Bid Schedule
Federal Acquisition Regulations (FAR) and Transportation Acquisition Regulations (TAR)
General Wage Decision
Special Contract Requirements

11. The Contractor shall begin performance within 10 calendar days and complete it within * calendar days after receiving the award, notice to proceed. This performance period is mandatory negotiable. (See *see page A-5 .)

12A. The Contractor must furnish any required performance and payment bonds? <i>(If "YES", indicate within how many calendar days after award in item 12B.)</i> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12B. Calendar Days 10
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13. Additional Solicitation Requirements:

- A. Sealed offers in original and 0 copies to perform the work required are due at the place specified in Item 8 by 2:00 PM local time **May 7, 2008**. If this is a sealed bid solicitation, offers must be publicly opened at that time. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due.
- B. An offer guarantee is is not required.
- C. All offers are subject to the (1) work requirements, and (2) other provisions and clauses incorporated in the solicitation in full text or by reference.
- D. Offers providing less than 60 calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.

OFFER (Must be fully completed by offeror)

14. Name and Address of Offeror <i>(Include ZIP Code)</i>	15. Telephone No. <i>(Include are code)</i>
16. Remittance Address <i>(Include on it different than Item 14)</i>	

DUNS number:

17. The offeror agrees to perform the work required at the prices specified below in strict accordance with the terms of this solicitation, if this is accepted by the Government in writing within 60 calendar days after the date offers are due. *(Insert any number equal to or greater than the minimum requirement stated in Item 13D. Failure to insert any number means the offeror accepts the minimum in Item 13D.)*

AMOUNTS	See Bid Schedule
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18. The offeror agrees to furnish any required performance and payment bonds.

19. ACKNOWLEDGEMENT OF AMENDMENTS

(The offeror acknowledges receipt of amendment to the solicitation - give number and date of each)

AMENDMENT No.									
DATE									

20A NAME, TITLE OF PERSON AUTHORIZED TO SIGN OFFER <i>(Type or Print)</i>	20B. SIGNATURE	20c. OFFER DATE
---	----------------	-----------------

AWARD (to be completed by Government)

21. ITEM(S) ACCEPTED
All items on Bid Schedule.

22. Amount	23. Accounting and Appropriation Data
------------	---------------------------------------

24. Submit Invoices to Address shown in <i>(4 copies unless otherwise specified)</i>	Item See Page A-5	25. Other Than full and open competition pursuant to
		<input type="checkbox"/> 10 U.S.C. 2304(c) (____) <input type="checkbox"/> 41 U.S.C 253 (c) (____)

26. Administered by Federal Highway Administration Western Federal Lands Highway Division 610 East Fifth Street Vancouver WA 98661-3801	Payment will be made by Finance Section Western Federal Lands Highway Division 610 East Fifth Street Vancouver WA 98661-3801
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CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE

<input type="checkbox"/> 28. NEGOTIATED AGREEMENT <i>(Contractor is required to sign this document and return _____ copies to issuing office)</i> Contractor agrees to furnish and deliver all items or perform all work requirements identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and(c) the clauses, representations, certifications, and specifications incorporated by reference in or attached to this contract.	<input checked="" type="checkbox"/> 29. AWARD <i>(Contractor is not required to sign this document.)</i> Your offer on this solicitation, is hereby accepted as to the items listed. This award consummates the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual document is necessary.
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30A. Name and Title of Contractor or Person authorized to sign <i>(Type or Print)</i>	31A. Name of Contracting Officer <i>(Type or Print)</i>		
	Julee McTaggart		
30b. Signature	30C. Date	31B. United States of America	31C. Award Date
		By	

Block 8 **ADDRESS.** Bids should be sent or delivered as follows: ATTN: Julee McTaggart, Contracting Officer, Montana Division - Federal Highway Administration, 585 Shepard Way, Helena, Montana, 59601. If you have questions about this address please contact the Montana Division at (406) 449-5302 extension 221.

Block 9 **FOR GENERAL INFORMATION,** call **360.619.7520** from the hours of 8:00 a.m. to 4:00 p.m. local time or e-mail us at contracts@mail.wfl.fhwa.dot.gov. You can also submit questions online from our Western Federal Lands webpage as described below.

FOR TECHNICAL INFORMATION (plan and specification questions only), requests for technical information about this project will only be accepted in writing. Submit questions via fax (360.619.7932) or e-mail at plans_spec@fhwa.dot.gov (plans_spec@fhwa.dot.gov). You can also submit questions online from our Western Federal Lands webpage as described below.

SUBMIT QUESTIONS ONLINE. You can submit your questions from our Western Federal Lands website <http://www.wfl.fha.dot.gov/edi/current.htm>. In “Advertised Projects”, scroll to the project and click on “Technical Information Question” or “General Information Question”, as applicable. Previously asked and answered questions will be available for viewing on the website.

FOR DAVIS-BACON WAGE RATE INFORMATION call the Department of Labor at **972.850.2634**.

FOR BID RESULTS, call **360.619.7773**. Bid tabulations will be available on our website approximately 3 work days after the bid opening. Our website is located at: www.wfl.fhwa.dot.gov/edi/.

Block 11 **COMPLETION DATE:** Work shall be completed on or before the date specified in FAR Clause 52.211-10, *Commencement, Prosecution, and Completion of Work*, subject to such extensions as may be authorized by the terms of the contract and the specifications made a part thereof. Contract Clauses begin on pages C-1.

Block 12A **PERFORMANCE & PAYMENT BONDS:** See FAR Clause, 52.228-15, *Performance and Payment Bonds - Construction* (clauses begin on page C-1) and Subsection 102.06 of the *Contract requirements*.

Block 13B **BID BOND AMOUNT:** See FAR Clause 52.228-1, Bid Guarantee (clauses begin on page C-1).

ADDITIONAL INFORMATION: See Subsections 102.03 and 102.04 of the *Contract requirements*.

Block 24 **SUBMITTING INVOICES:** See Subsection 109.08 of the *Contract Requirements*.

SMALL BUSINESS COMPETITIVENESS DEMONSTRATION PROGRAM. This solicitation is NOT a Small Business Set-Aside. However, award will be made pursuant to the Small Business Competitiveness Demonstration Program.

ESTIMATED PRICES. The price range of the project work is between **\$1,000,000** and **\$5,000,000**.

SUBCONTRACTING PLAN. This invitation for bids requires a low bidder who is a LARGE business to submit an acceptable subcontracting plan prior to contract award. **Do not submit this form with your bid.** A large business is one whose average gross annual receipts over the past 3 years equal \$31 million or more. For your information the subcontracting plan form is included beginning on page A-6a. This requirement does not apply to SMALL businesses.

DBE QUOTES. The Montana Department of Transportation (MDT) has a quick and easy way for you to request quotes from Montana DBE-certified companies. The information goes to the DBE companies the same day that you request quotes. The on-line DBE Quote Request form is located at: <http://www.mdt.mt.gov/business/contracting/civil/quotereq.shtml>. Call MDT, 800.883.5811 with questions.

Subcontracting Plan

For Information Only. Do not submit with your bid.

Contractor: _____

Address: _____

This plan is submitted in accordance with Federal Acquisition Regulations Contract Clause 52.219-9, *Small Business Subcontracting Plan*, and will be applicable to any contract awarded as result of this solicitation.

Use the following table to indicate:

1. Goals, express in terms of percentages of total planned subcontracting dollars (column 4)
2. Planned subcontracting dollars (column 2).

1 Business Type	2 Planned Subcontracting (Dollars)	3 Calculating Goal percent	4 Goal (Percent)
(i) <u>Total</u> planned for Subcontracting, include businesses of all sizes (large, small, vet owned, etc.).	2(i)	n/a	100%
(ii) Small business concerns (including ANCs & Indian tribes)	2(ii)	2(ii) / 2(i)	
(iii) Veteran-owned small business concerns	2(iii)	2(iii) / 2(i)	
(iv) Service-disabled veteran-owned small business concerns	2(iv)	2(iv) / 2(i)	
(v) HUBZone small business concerns.	2(v)	2(v) / 2(i)	
(vi) Small disadvantaged business concerns (including ANCs & Indian tribes)	2(vi)	2(vi) / 2(i)	
(vii) Women-owned small business concerns	2(vii)	2(vii) / 2(i)	

3(i). Supplies and services (work) to be subcontracted to small business concerns:

Subcontracting Plan – A-6b

3(ii). Supplies and services (work) to be subcontracted to veteran-owned small business concerns:

3(iii). Supplies and services (work) to be subcontracted to service-disabled veteran-owned small business concerns:

3(iv). Supplies and services (work) to be subcontracted to HUBZone small business concerns_

3(v). Supplies and services (work) to be subcontracted to small disadvantaged business concerns (including ANCs & Indian tribes):

3(vi). Supplies and services (work) to be subcontracted to women-owned small business concerns:

4. The following method was used to develop the subcontracting goals:

Subcontracting Plan – A-6c

5. The following method(s) was/were used to identify potential sources [e.g., existing company source lists, the Dynamic Small Business search (on CCR), veterans service organizations, the National Minority Purchasing Council Vender Information Service, the Research & Information Division of the Minority Business Development Agency in the Department of Commerce, or small, HUBZone, small disadvantaged and women-owned small business trade associations]:

6. Indirect or overhead costs ()have ()have not been included in the goals specified above. If costs have been included, describe the method used to determine the proportionate share of costs to be incurred with each type of business.

7. The following individual will administer this subcontracting program:

Name: _____

Describe the individual's duties relating to the accomplishment of this subcontracting program:

8. Describe the efforts the Contractor will make to assure that small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns have an equitable opportunity to compete for subcontracts.

9. The Contractor agrees that FAR Contract Clause 52.219-8, *Utilization of Small Business Concerns*, will be included in all subcontracts that offer further subcontracting opportunities, and that the Contractor will require all subcontractors (except small business concerns) who receive subcontracts in excess of \$550,000 (\$1,000,000 if construction) to adopt a subcontracting plan that complies with the requirements of FAR Contract Clause 52.219-9, *Small Business Subcontracting Plan*.

10. The Contractor agrees to: (i) Cooperate in any studies or surveys as may be required; (ii) Submit periodic reports concerning compliance with this subcontracting plan; (iii) Submit *Standard Form (SF) 294, Subcontracting Report for Individual Contracts*, and *Standard Form (SF) 295,*

Subcontracting Plan

Project: MT OMAD 18(41), Minuteman Missile Base Roads

Subcontracting Plan – A-6d

Summary Subcontract Report, in accordance with the instructions on the forms; and (iv) Ensure that its subcontractors agree to submit SF 294 and SF 295.

The SF 294 shall be submitted semiannually and at contract completion. The SF 295 shall be submitted annually at the close of each fiscal year (Sep 30).

11. The Contractor agrees to maintain records to demonstrate procedures adopted to comply with the requirements and goals of this plan. These records shall describe the Contractor's efforts to locate small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns and award subcontracts to these concerns. At a minimum, the records shall include the following:
 - (i) Source lists (e.g. CCR), guides, and other data used to identify small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns.
 - (ii) Organizations contacted in an attempt to locate sources that are small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns.
 - (iii) Records on each subcontract award of more than \$100,000. These records shall indicate:
 - (A) Whether small business concerns were solicited and, if not, why not.
 - (B) Whether veteran-owned small business concerns were contacted and, if not, why not.
 - (C) Whether service-disabled veteran-owned small business concerns were contacted and, if not, why not.
 - (D) Whether HUBZone small business concerns were contacted and, if not, why not.
 - (E) Whether small disadvantaged business concerns (including ANCs & Indian tribes) were contacted and, if not, why not.
 - (F) Whether women-owned small business concerns were contacted and, if not, why not.
 - (G) If applicable, the reason award was not made to a small business.
 - (iv) Records of outreach efforts to contact trade associations, business development organizations, and conferences/trade fairs in an attempt to locate small, HUBZone small, small disadvantaged and women-owned small business concerns. Records of efforts to contact veterans service organizations.
 - (v). Records of internal guidance/encouragement provided to buyers through workshops, seminars, training, etc., and monitoring performance to evaluate compliance with the program's requirements.
 - (vi). On a contract-by-contract basis, records to support award data submitted by the offeror to the Government, including the name, address, and business size of each subcontractor.

Subcontracting Plan – A-6e

The Contractor agrees to:

1. Assist small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns by arranging solicitations, time for the preparation of bids, quantities, specifications, and delivery schedules so as to facilitate the participation by such concerns. Where the Contractor's lists of potential small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business subcontractors are excessively long, reasonable effort shall be made to give all such small business concerns an opportunity to compete over a period of time.
2. Provide adequate and timely consideration of the potentialities of small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns in all "make-or-buy" decisions.
3. Counsel and discuss subcontracting opportunities with representatives of small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns.
4. Confirm that a subcontractor representing itself as a HUBZone small business concern is identified as a certified HUBZone small business concern by accessing the Central Contractor Registration (CCR) database or by contacting SBA.
5. Provide notice to subcontractors concerning penalties and remedies for misrepresentations of business status as small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business for the purpose of obtaining a subcontract that is to be included as part or all of a goal contained in this subcontracting plan.

The Contractor acknowledges that a failure of the Contractor or subcontractor to comply in good faith with clause 52.219-8, *Utilization of Small Business Concerns*, or this approved subcontracting plan shall be considered a material breach of the contract.

Contractor:

Submitted By: _____

Name and Title of Signer (Type or Print)

Signature of Person Authorized to Sign

Date: _____

Federal Highway Administration:

Accepted by: _____

_____, Contracting Officer

Date: _____

Subcontracting Plan

Project: MT OMAD 18(41), Minuteman Missile Base Roads

Subcontracting Plan – A-6f

Reserved

Bid Schedule

Project: MT OMAD 18(41)
MINUTEMAN MISSILE BASE ROADS

Bidder please note: Before preparing the bid, carefully read the Solicitation Provisions.

Insert a unit bid price, in figures, for each pay item for which a quantity appears in the bid schedule. Multiply the unit price by the quantity for each pay item and show the amount bid. Should any mathematical check made by the Government show a mistake in the amount bid, the Amount Bid for the item will be based on the Unit Bid Price.

When "LPSM" (Lump Sum) appears as a unit bid price, insert an amount for each lump sum pay item.

When a sum based on a fixed rate appears for any pay item in the amount bid column, include the Government inserted amount bid for the item in the total bid amount.

Total the amounts bid for all pay items and insert the total bid amount.

The quantity for the following item of work is a Contract Quantity (see Subsection 109.02):
55701-1000

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
15101-0000	MOBILIZATION ALL	Lump Sum	\$ _____
15301-0000	CONTRACTOR QUALITY CONTROL ALL	Lump Sum	\$ _____
15401-0000	CONTRACTOR TESTING ALL	Lump Sum	\$ _____
15501-0000	CONSTRUCTION SCHEDULE ALL	Lump Sum	\$ _____
15705-1500	SOIL EROSION CONTROL, SEDIMENT WATTLE 1,100 LNFT	\$ _____	\$ _____
15801-0000	WATERING FOR DUST CONTROL 1,398 MGAL	\$ _____	\$ _____

Bid Schedule - Base

Project: MT OMAD 18(41)
MINUTEMAN MISSILE BASE ROADS

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
30202-5010	LIME TREATED AGGREGATE COURSE, 4-INCH DEPTH 55,500 SQYD	\$ _____	\$ _____
30207-0000	LIME 59 TON	\$ _____	\$ _____
30303-3000	ROADWAY RECONDITIONING 126,972 SQYD	\$ _____	\$ _____
30405-3000	CALCIUM CHLORIDE AGGREGATE STABILIZATION, IN-PLACE AGGREGATE, 3-INCH DEPTH , LOCATION L-02 14,100 SQYD	\$ _____	\$ _____
30405-3000	CALCIUM CHLORIDE AGGREGATE STABILIZATION, IN-PLACE AGGREGATE, 3-INCH DEPTH , LOCATION M-06 14,100 SQYD	\$ _____	\$ _____
30410-3000	CALCIUM CHLORIDE AGGREGATE STABILIZATION, IMPORTED SURFACE COURSE AGGREGATE , LOCATION E-02 6,360 TON	\$ _____	\$ _____
30418-0000	CALCIUM CHLORIDE , LOCATION E-02 126 TON	\$ _____	\$ _____
30418-0000	CALCIUM CHLORIDE , LOCATION L-02 50 TON	\$ _____	\$ _____
30418-0000	CALCIUM CHLORIDE , LOCATION M-06 50 TON	\$ _____	\$ _____
55701-1000	STRUCTURAL TIMBER AND LUMBER, UNTREATED 3.0 MFBM	\$ _____	\$ _____
62201-0300	DUMP TRUCK, 12 CUBIC YARD MINIMUM CAPACITY 24 HOUR	\$ _____	\$ _____

Bid Schedule - Base

Project: MT OMAD 18(41)
MINUTEMAN MISSILE BASE ROADS

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
62201-0550	BACKHOE LOADER, 6 CUBIC FOOT MINIMUM RATED CAPACITY BUCKET, 24-INCH WIDTH 24 HOUR	\$ _____	\$ _____
62201-2050	ROLLER E LOADER, 6 CUBIC FOOT MINIMUM RATED CAPACITY BUCKET, 24-INCH WIDTH 10 HOUR	\$ _____	\$ _____
62201-2850	MOTOR GRADER, 12 FOOT MINIMUM BLADE 21 HOUR	\$ _____	\$ _____
63501-0000	TEMPORARY TRAFFIC CONTROL ALL	Lump Sum	\$ _____
63509-1000	TEMPORARY TRAFFIC CONTROL, FLAGGER 512 FIX HR RATE	39.00	19,968.00

TOTAL \$ _____

Submitted by: _____
Name of Bidder

Bid Schedule - Base

Project: MT OMAD 18(41)
MINUTEMAN MISSILE BASE ROADS

Bid Schedule

Project: MT OMAD 18(41) - OPTION A
 MINUTEMAN MISSILE BASE ROADS

Bidder please note: Before preparing the bid, carefully read the Solicitation Provisions.

Insert a unit bid price, in figures, for each pay item for which a quantity appears in the bid schedule. Multiply the unit price by the quantity for each pay item and show the amount bid. Should any mathematical check made by the Government show a mistake in the amount bid, the Amount Bid for the item will be based on the Unit Bid Price.

When "LPSM" (Lump Sum) appears as a unit bid price, insert an amount for each lump sum pay item.

When a sum based on a fixed rate appears for any pay item in the amount bid column, include the Government inserted amount bid for the item in the total bid amount.

Total the amounts bid for all pay items and insert the total bid amount.

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
15101-0000	MOBILIZATION		
	ALL	Lump Sum	\$ _____
15301-0000	CONTRACTOR QUALITY CONTROL		
	ALL	Lump Sum	\$ _____
15401-0000	CONTRACTOR TESTING		
	ALL	Lump Sum	\$ _____
15501-0000	CONSTRUCTION SCHEDULE		
	ALL	Lump Sum	\$ _____
15705-1500	SOIL EROSION CONTROL, SEDIMENT WATTLE		
	840		
	LNFT	\$ _____	\$ _____
15801-0000	WATERING FOR DUST CONTROL		
	783		
	MGAL	\$ _____	\$ _____
30303-3000	ROADWAY RECONDITIONING		
	72,864		
	SQYD	\$ _____	\$ _____

Bid Schedule - Option A

Project: MT OMAD 18(41) - OPTION A
 MINUTEMAN MISSILE BASE ROADS

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
30410-3000	CALCIUM CHLORIDE AGGREGATE STABILIZATION, IMPORTED SURFACE COURSE AGGREGATE , LOCATION E-11		
	15,120 TON	\$ _____	\$ _____
30418-0000	CALCIUM CHLORIDE , LOCATION E-11		
	297 TON	\$ _____	\$ _____
62201-0300	DUMP TRUCK, 12 CUBIC YARD MINIMUM CAPACITY		
	12 HOUR	\$ _____	\$ _____
62201-0550	BACKHOE LOADER, 6 CUBIC FOOT MINIMUM RATED CAPACITY BUCKET, 24-INCH WIDTH		
	12 HOUR	\$ _____	\$ _____
62201-2050	ROLLER E LOADER, 6 CUBIC FOOT MINIMUM RATED CAPACITY BUCKET, 24-INCH WIDTH		
	6 HOUR	\$ _____	\$ _____
62201-2850	MOTOR GRADER, 12 FOOT MINIMUM BLADE		
	12 HOUR	\$ _____	\$ _____
63501-0000	TEMPORARY TRAFFIC CONTROL		
	ALL	Lump Sum	\$ _____
63509-1000	TEMPORARY TRAFFIC CONTROL, FLAGGER		
	280 FIX HR RATE	39.00	10,920.00

TOTAL \$ _____

Submitted by: _____
Name of Bidder

Bid Schedule - Option A

Project: MT OMAD 18(41) - OPTION A
 MINUTEMAN MISSILE BASE ROADS

Bid Schedule

Project: MT OMAD 18(41) - OPTION B
MINUTEMAN MISSILE BASE ROADS

Bidder please note: Before preparing the bid, carefully read the Solicitation Provisions.

Insert a unit bid price, in figures, for each pay item for which a quantity appears in the bid schedule. Multiply the unit price by the quantity for each pay item and show the amount bid. Should any mathematical check made by the Government show a mistake in the amount bid, the Amount Bid for the item will be based on the Unit Bid Price.

When "LPSM" (Lump Sum) appears as a unit bid price, insert an amount for each lump sum pay item.

When a sum based on a fixed rate appears for any pay item in the amount bid column, include the Government inserted amount bid for the item in the total bid amount.

Total the amounts bid for all pay items and insert the total bid amount.

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
15101-0000	MOBILIZATION		
	ALL	Lump Sum	\$ _____
15301-0000	CONTRACTOR QUALITY CONTROL		
	ALL	Lump Sum	\$ _____
15401-0000	CONTRACTOR TESTING		
	ALL	Lump Sum	\$ _____
15501-0000	CONSTRUCTION SCHEDULE		
	ALL	Lump Sum	\$ _____
15705-1500	SOIL EROSION CONTROL, SEDIMENT WATTLE		
	450 LNFT	\$ _____	\$ _____
15801-0000	WATERING FOR DUST CONTROL		
	1,190 MGAL	\$ _____	\$ _____
30110-0000	AGGREGATE SURFACE COURSE , GRADING H, LOCATION L-05		
	18,730 TON	\$ _____	\$ _____

Bid Schedule - Option B

Project: MT OMAD 18(41) - OPTION B
MINUTEMAN MISSILE BASE ROADS

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
30303-3000	ROADWAY RECONDITIONING 105,383 SQYD	\$ _____	\$ _____
30410-3000	CALCIUM CHLORIDE AGGREGATE STABILIZATION, IMPORTED SURFACE COURSE AGGREGATE , LOCATION L-05 3,080 TON	\$ _____	\$ _____
30418-0000	CALCIUM CHLORIDE , LOCATION L-05 61 TON	\$ _____	\$ _____
62201-0300	DUMP TRUCK, 12 CUBIC YARD MINIMUM CAPACITY 16 HOUR	\$ _____	\$ _____
62201-0550	BACKHOE LOADER, 6 CUBIC FOOT MINIMUM RATED CAPACITY BUCKET, 24-INCH WIDTH 16 HOUR	\$ _____	\$ _____
62201-2050	ROLLER 6 HOUR	\$ _____	\$ _____
62201-2850	MOTOR GRADER, 12 FOOT MINIMUM BLADE 16 HOUR	\$ _____	\$ _____
63501-0000	TEMPORARY TRAFFIC CONTROL ALL	Lump Sum	\$ _____
63509-1000	TEMPORARY TRAFFIC CONTROL, FLAGGER 440 FIX HR RATE	39.00	17,160.00

TOTAL \$ _____

Submitted by: _____

Name of Bidder

Bid Schedule - Option B

Project: MT OMAD 18(41) - OPTION B
MINUTEMAN MISSILE BASE ROADS

Bid Schedule

Project: MT OMAD 18(41) - OPTION C
MINUTEMAN MISSILE BASE ROADS

Bidder please note: Before preparing the bid, carefully read the Solicitation Provisions.

Insert a unit bid price, in figures, for each pay item for which a quantity appears in the bid schedule. Multiply the unit price by the quantity for each pay item and show the amount bid. Should any mathematical check made by the Government show a mistake in the amount bid, the Amount Bid for the item will be based on the Unit Bid Price.

When "LPSM" (Lump Sum) appears as a unit bid price, insert an amount for each lump sum pay item.

When a sum based on a fixed rate appears for any pay item in the amount bid column, include the Government inserted amount bid for the item in the total bid amount.

Total the amounts bid for all pay items and insert the total bid amount.

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
15101-0000	MOBILIZATION		
	ALL	Lump Sum	\$ _____
15301-0000	CONTRACTOR QUALITY CONTROL		
	ALL	Lump Sum	\$ _____
15401-0000	CONTRACTOR TESTING		
	ALL	Lump Sum	\$ _____
15501-0000	CONSTRUCTION SCHEDULE		
	ALL	Lump Sum	\$ _____
15705-1500	SOIL EROSION CONTROL, SEDIMENT WATTLE		
	100 LNFT	\$ _____	\$ _____
15801-0000	WATERING FOR DUST CONTROL		
	96 MGAL	\$ _____	\$ _____
30110-0000	AGGREGATE SURFACE COURSE , GRADING H, LOCATION E-09		
	690 TON	\$ _____	\$ _____

Bid Schedule - Option C

Project: MT OMAD 18(41) - OPTION C
MINUTEMAN MISSILE BASE ROADS

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
30303-3000	ROADWAY RECONDITIONING 7,893 SQYD	\$ _____	\$ _____
30410-3000	CALCIUM CHLORIDE AGGREGATE STABILIZATION, IMPORTED SURFACE COURSE AGGREGATE , LOCATION N-09 970 TON	\$ _____	\$ _____
30418-0000	CALCIUM CHLORIDE , LOCATION N-09 20 TON	\$ _____	\$ _____
62201-0300	DUMP TRUCK, 12 CUBIC YARD MINIMUM CAPACITY 4 HOUR	\$ _____	\$ _____
62201-0550	BACKHOE LOADER, 6 CUBIC FOOT MINIMUM RATED CAPACITY BUCKET, 24-INCH WIDTH 4 HOUR	\$ _____	\$ _____
62201-2050	ROLLER 2 HOUR	\$ _____	\$ _____
62201-2850	MOTOR GRADER, 12 FOOT MINIMUM BLADE 3 HOUR	\$ _____	\$ _____
63501-0000	TEMPORARY TRAFFIC CONTROL ALL	Lump Sum	\$ _____
63509-1000	TEMPORARY TRAFFIC CONTROL, FLAGGER 32 FIX HR RATE	39.00	1,248.00

TOTAL \$ _____

Submitted by: _____

Name of Bidder

Bid Schedule - Option C

Project: MT OMAD 18(41) - OPTION C
MINUTEMAN MISSILE BASE ROADS

Bid Summary

Project: MT OMAD 18(41), Minuteman Missile Base Roads

SCHEDULE	SCHEDULE AMOUNT
Base (page A-7)	\$ _____
Option A (page A-10)	\$ _____
Option B (page A-12)	\$ _____
Option C (page A-14)	\$ _____
TOTAL – ALL SCHEDULES	\$ _____

Submitted by: _____

Bid Schedule-Summary

Project: MT OMAD 18(41), Minuteman Missile Base Roads

SOLICITATION PROVISIONS

A. Provisions Incorporated by Reference

52.252-1 Solicitation Provisions Incorporated by Reference

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available; phone (360) 619-7520 and FAX (360) 619-7932. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this site: www.arnet.gov/far/.

I. Representations, Certifications and Other Statements of Offeror (by reference)

52.203-11 Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions (Sep 2007)

52.222-23 Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity for Construction (Feb 1999)

(b) Goals for minority participation for each trade 4.1%

Goals for female participation for each trade 6.9%

(e) As used in this Notice, and in any contract resulting from this solicitation, the "covered area" is Fergus and Wheatland County, Montana.

II. Instructions, Conditions and Notices to Offeror (by reference)

52.204-6 Data Universal Numbering System (DUNS) Number (Oct 2003)

52.214-3 Amendments to Invitations for Bids (Dec 1989)

52.214-4 False Statements in Bids (Apr 1984)

52.214-5 Submission of Bids (Mar 1997)

52.214-6 Explanation to Prospective Bidders (Apr 1984)

52.214-7 Late Submissions, Modifications, and Withdrawals of Bids (Nov 1999)

52.214-18 Preparation of Bids - Construction (Apr 1984)

52.214-19 Contract Award - Sealed Bidding - Construction (Aug 1996)

52.214-34 Submission of Offers in the English Language (Apr 1991)

52.214-35 Submission of Offers in U.S. Currency (Apr 1991)

52.217-5 Evaluations of Options (Jul 1990)

52.236-27 Site Visit (Construction) (Feb 1995)

There will be no government arranged site visits. The site is readily available for inspection. Prospective offerors are encouraged to make their own arrangements to inspect the site.

B. Full Text Provisions

I. Representations, Certifications & Other Statements of Bidders (full text)

Completing FAR provision 52.204-8 Annual Representation and Certifications.

- This solicitation is issued under **NAICS 237310 – Highway, Street & Bridge Construction** with a small business size standard of **\$31 million**. If your average annual gross receipts for the past 3 years are **above \$31.0 million** you are a large business for this solicitation. If they are **below \$31.0 million** you are a small business. Please complete the certification listed in paragraph (b).
- Your small business information is pulled into ORCA from the Central Contractor Registration (CCR). Please include NAICS **237310** in the Central Contractor Registration (CCR) at <http://www.ccr.gov/>. Please note that if you are currently using a NAICS code beginning in **234**, you are using an **outdated** code. Please update your files to **237310 – Highway, Street & Bridge Construction**.
- Before submitting bids, please ensure you have completed your annual representations and certifications electronically at the ORCA website, <http://orca.bpn.gov>.

52.204-8 Annual Representation and Certifications (Jan 2006)

(a) (1) The North American Industry Classification (NAICS) code for this solicitation is **237310 – Highway, Street & Bridge construction** [insert NAICS code].

(2) The small business size standard is **\$31 million** [insert size standard].

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b) (1) If the clause at 52.204-7, Central Contractor Registration, is included in this solicitation, paragraph (c) of this provision applies.

(2) If the clause at 52.204-7 is not included in this solicitation, and the offeror is currently registered in CCR, and has completed the ORCA electronically, the offeror may choose to use paragraph (c) of this provision instead of completing the corresponding individual representations and certifications in the solicitation. The offeror shall indicate which option applies by **checking one** of the following boxes:

(i) Paragraph (c) applies.

(ii) Paragraph (c) does not apply and the offeror has completed the individual representations and certifications in the solicitation.

(c) The offeror has completed the annual representations and certifications electronically via the **Online Representations and Certifications Application (ORCA)** website at <http://orca.bpn.gov>. After reviewing the ORCA database information, the offeror verifies by submission of the offer that the representations and certifications currently posted electronically have been entered or updated within the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR 4.1201); **except for the changes identified below [offeror to insert changes, identifying change by clause number, title, date]**. These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.

Far Clause #	Title	Date	Change
52.219-1	Small Business Program Representations		Under NAICS Code <u>237310</u> the offeror represents as part of its offer that it <u>() is, () is not a small business.</u>

Any changes provided by the offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications posted on ORCA.

52.225-10 Notice of Buy American Act Requirement—Construction Materials (May 2002)

(a) *Definitions.* “Construction material,” “domestic construction material,” and “foreign construction material,” as used in this provision, are defined in the clause of this solicitation entitled “Buy American Act—Construction Materials” (Federal Acquisition Regulation (FAR) clause 52.225-9).

(b) *Requests for determinations of inapplicability.* An offeror requesting a determination regarding the inapplicability of the Buy American Act should submit the request to the Contracting Officer in time to allow a determination before submission of offers. The offeror shall include the information and applicable supporting data required by paragraphs (c) and (d) of the clause at FAR 52.225-9 in the request. If an offeror has not requested a determination regarding the inapplicability of the Buy American Act before submitting its offer, or has not received a response to a previous request, the offeror shall include the information and supporting data in the offer.

(c) Evaluation of offers.

(1) The Government will evaluate an offer requesting exception to the requirements of the Buy American Act, based on claimed unreasonable cost of domestic construction material, by adding to the offered price the appropriate percentage of the cost of such foreign construction material, as specified in paragraph (b)(3)(i) of the clause at FAR 52.225-9.

(2) If evaluation results in a tie between an offeror that requested the substitution of foreign construction material based on unreasonable cost and an offeror that did not request an exception, the Contracting Officer will award to the offeror that did not request an exception based on unreasonable cost.

(d) Alternate offers.

(1) When an offer includes foreign construction material not listed by the Government in this solicitation in paragraph (b)(2) of the clause at FAR 52.225-9, the offeror also may submit an alternate offer based on use of equivalent domestic construction material.

(2) If an alternate offer is submitted, the offeror shall submit a separate Standard Form 1442 for the alternate offer, and a separate price comparison table prepared in accordance with paragraphs (c) and (d) of the clause at FAR 52.225-9 for the offer that is based on the use of any foreign construction material for which the Government has not yet determined an exception applies.

(3) If the Government determines that a particular exception requested in accordance with paragraph (c) of the clause at FAR 52.225-9 does not apply, the Government will evaluate only those offers based on use of the equivalent domestic construction material, and the offeror shall be required to furnish such domestic construction material. An offer based on use of the foreign construction material for which an exception was requested—

- (i) Will be rejected as nonresponsive if this acquisition is conducted by sealed bidding; or
- (ii) May be accepted if revised during negotiations

Use of Recovered Materials on Federal Lands Highway Projects

Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) of 1976, as amended (42 U.S.C. 6901 *et seq.*), requires Federal, State, and local procuring agencies using appropriated Federal funds to purchase items composed of the highest percentage of recovered materials practical. Use of recovered materials is strongly encouraged on Federal Lands Highway Projects. Highway construction items covered by the Environmental Protection Agency's *Comprehensive Guidelines for Procurement of Products Containing Recovered Materials* include fly ash, ground granulated blast furnace slag, traffic barricades, traffic cones, hydraulic mulch and compost for mulch.

Use of **fly ash** and ground **granulated blast furnace slag** and construction materials containing fly ash and ground granulated blast furnace slag on Federal Lands Highway Projects:

- It is the policy of the United States Government that fly ash and ground granulated blast furnace slag and materials containing fly ash and ground granulated blast furnace slag shall have maximum practicable opportunity for incorporation into its construction projects.
- The Contractor agrees to investigate the use of fly ash and ground granulated blast furnace slag and materials containing fly ash and ground granulated blast furnace slag to the fullest extent consistent with the efficient performance of this contract. Both the contractor and the subcontractors are urged to seek out suppliers of fly ash and ground granulated blast furnace slag, cement and concrete containing fly ash and ground granulated blast furnace slag and to solicit bids for these materials.
- Names of firms that supply fly ash and ground granulated blast furnace slag and materials containing fly ash and ground granulated blast furnace slag are available from the American Coal Ash Association and the National Slag Association.

THE FOLLOWING ARE REQUESTED FOR REPORTING PURPOSES ONLY:

1. Your firm's Dun & Bradstreet Number: _____
2. Your firm's U.S. Representative _____ (insert representative's name)
3. Your Firm's U.S. Representative District _____ (insert the district number)

(To obtain a Dun & Bradstreet number call 800.333.0505.)

(Access US Representative information on-line at www.house.gov/writerep/. Enter your State and zip code to obtain your representative's name and district number.)

Solicitation Provisions

Project: MT OMAD 18(41), Minuteman Missile Base Roads

II. Instructions, Conditions, and Notices to Bidders - (full text)

52.211-1 Availability of Specifications Listed in the GSA Index of Federal Specifications, Standards and Commercial Item Descriptions, FPMR Part 101-29 (Aug 1998)

(a) The GSA Index of Federal Specifications, Standards and Commercial Item Descriptions, FPMR Part 101-29, and copies of specifications, standards, and commercial item descriptions cited in this solicitation may be obtained for a fee by submitting a request to—

GSA Federal Supply Service
Specifications Section, Suite 8100
470 East L'Enfant Plaza, SW
Washington, DC 20407
Telephone: (202) 619-8925
Facsimile: (202) 619-8978.

(b) If the General Services Administration, Department of Agriculture, or Department of Veterans Affairs issued this solicitation, a single copy of specifications, standards, and commercial item descriptions cited in this solicitation may be obtained free of charge by submitting a request to the addressee in paragraph (a) of this provision. Additional copies will be issued for a fee.

52.211-3 Availability of Specifications Not Listed in the GSA Index of Federal Specifications, Standards and Commercial Item Descriptions (Jun 1988)

The specifications cited in this solicitation may be obtained from:

Activity: **Federal Highway Administration, Western Federal Lands Highway Division**
Complete Address: **610 East Fifth Street, Vancouver, WA 98661-3801**
Telephone Number: **(360) 619-7520**
Contact: **Contracts Section**

The request should identify the solicitation number and the specification requested by date, title, and number, as cited in the solicitation.

52.216-1 Type of Contract (Apr 1984)

The Government contemplates award of a **firm fixed-price** contract resulting from this solicitation.

52.222-5 Davis-Bacon Act—Secondary Site of the Work (July 2005)

(a)(1) The offeror shall notify the Government if the offeror intends to perform work at any secondary site of the work, as defined in paragraph (a)(1)(ii) of the FAR clause at 52.222-6, Davis-Bacon Act, of this solicitation.

(2) If the offeror is unsure if a planned work site satisfies the criteria for a secondary site of the work, the offeror shall request a determination from the Contracting Officer.

(b)(1) If the wage determination provided by the Government for work at the primary site of the work is not applicable to the secondary site of the work, the offeror shall request a wage determination from the Contracting Officer.

(2) The due date for receipt of offers will not be extended as a result of an offeror's request for a wage determination for a secondary site of the work.

52.233-2 Service of Protest (Sep 2006)

(a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the Government Accountability Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from **Contracting Officer, Contracts Section, Federal Highway Administration, 610 East Fifth Street, Vancouver, WA 98661-3801.**

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

CONTRACT CLAUSES

1. Clauses Incorporated by Reference

Federal Acquisition Regulation (FAR) clauses begin with “52” and are available online at: www.arnet.gov/far/. Transportation Acquisition Regulation (TAR) clauses begin with “1252” and are available online at: <http://www.dot.gov/ost/m60/tamtar/tar.htm>.

52.252-2 Clauses Incorporated by Reference (Feb 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available; phone (360) 619-7520 and FAX (360) 619-7932. Also, you may access the full text of a clause electronically at this site: www.arnet.gov/far/.

- | | |
|-----------|--|
| 52.202-1 | Definitions (Jul 2004) |
| 52.203-3 | Gratuities (Apr 1984) |
| 52.203-5 | Covenant Against Contingent Fees (Apr 1984) |
| 52.203-6 | Restrictions on Subcontractor Sales to the Government (Sep 2006) |
| 52.203-7 | Anti-Kickback Procedures (Jul 1995) |
| 52.203-8 | Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity (Jan 1997) |
| 52.203-10 | Price or Fee Adjustment for Illegal or Improper Activity (Jan 1997) |
| 52.203-12 | Limitation on Payments to Influence Certain Federal Transactions (Sep 2007) |
| 52.204-4 | Printed or Copied Double-Sided on Recycled Paper (Aug 2000) |
| 52.204-7 | Central Contractor Registration (Jul 2006) |
| 52.209-6 | Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment (Sep 2006) |
| 52.211-12 | Liquidated Damages-Construction (Sep 2000)
(a) If the Contractor fails to complete the work within the time specified in the contract, the Contractor shall pay liquidated damages to the Government in the amount of: <u>See Special Contract Requirements, Subsection 108.04.</u> |
| 52.211-18 | Variation in Estimated Quantity (Apr 1984) |
| 52.214-26 | Audit and Records - Sealed Bidding (Oct 1997) |
| 52.214-27 | Price Reduction for Defective Cost or Pricing Data-Modifications-Sealed Bidding (Oct 1997) |
| 52.214-28 | Subcontractor Cost or Pricing Data-Modifications-Sealed Bidding (Oct 1997) |
| 52.217-7 | Option for Increased Quantity-Separately Priced Line Item (Mar 1989)
...The Contracting Officer may exercise the option by written notice to the contractor by <u>January 31, 2009</u>. |
| 52.219-4 | Notice of Price Evaluation Preference for HUBZone Small Business Concerns (Jul 2005)
<i>(See note in FAR Clause 52.236-1.) (See special contract requirement 108.02A, which incorporates increased minimum work requirements.)</i>
(c) Waiver of evaluation preference. A HUBZone small business concern may elect to waive the evaluation preference, in which case the factor will be added to its offer for evaluation purposes. The agreements in paragraph (d) of this clause do not apply if the offeror has waived the evaluation preference.
() Offeror elects to waive the evaluation preference. |
| 52.219-8 | Utilization of Small Business Concerns (May 2004) |
| 52.219-9 | Small Business Subcontracting Plan (Nov 2007) - Alternate 1 (Oct 2001) |
| 52.219-16 | Liquidated Damages-Subcontracting Plan (Jan 1999) |
| 52.222-3 | Convict Labor (Jun 2003) |

- 52.222-4 Contract Work Hours and Safety Standards Act-Overtime Compensation (Jul 2005)
52.222-6 Davis-Bacon Act (Jul 2005)
52.222-7 Withholding of Funds (Feb 1988)
52.222-8 Payrolls and Basic Records (Feb 1988)
52.222-9 Apprentices and Trainees (Jul 2005)
52.222-10 Compliance with Copeland Act Requirements (Feb 1988)
52.222-11 Subcontracts (Labor Standards) (Jul 2005)
52.222-12 Contract Termination-Debarment (Feb 1988)
52.222-13 Compliance with Davis-Bacon and Related Act Regulations (Feb 1988)
52.222-14 Disputes Concerning Labor Standards (Feb 1988)
52.222-15 Certification of Eligibility (Feb 1988)
52.222-21 Prohibition of Segregated Facilities (Feb 1999)
52.222-26 Equal Opportunity (Mar 2007)
52.222-27 Affirmative Action Compliance Requirements for Construction (Feb 1999)
52.222-35 Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Sep 2006)
52.222-36 Affirmative Action for Workers with Disabilities (Jun 1998)
52.222-37 Employment Reports on Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Sep 2006)
52.222-50 Combating Trafficking in Persons (Aug 2007)
52.223-3 Hazardous Material Identification and Material Safety Data (Jan 1997) Alternate I (July 1995)
52.223-6 Drug-Free Workplace (May 2001)
52.223-14 Toxic Chemical Release Reporting (Aug 2003)
52.225-13 Restrictions on Certain Foreign Purchases (Feb 2006)
52.227-1 Authorization and Consent (Dec 2007)
52.227-2 Notice and Assistance Regarding Patent and Copyright Infringement (Dec 2007)
52.227-4 Patent Indemnity-Construction Contracts (Dec 2007)
52.228-1 Bid Guarantee (Sep 1996)
(c) **The amount of the bid guarantee shall be 20 percent of the bid price or \$3 million, whichever is less.**
(d) **...furnish execute bonds within 10 days after receipt of the forms.....**
52.228-2 Additional Bond Security (Oct 1997)
52.228-11 Pledges of Assets (Feb 1992)
52.228-12 Prospective Subcontractor Requests for Bonds (Oct 1995)
52.228-14 Irrevocable Letter of Credit (Dec 1999)
52.228-15 Performance and Payment Bonds-Construction (Nov 2006)
52.229-3 Federal, State, and Local Taxes (Apr 2003)
52.232-5 Payments under Fixed-Price Construction Contracts (Sep 2002)
52.232-17 Interest (Jun 1996)
52.232-23 Assignment of Claims (Jan 1986)
52.232-27 Prompt Payment for Construction Contracts (Sep 2005)
52.232-34 Payment by Electronic Funds Transfer – Other than Central Contractor Registration (May 1999)
52.232-35 Designation of Office for Government Receipt of Electronic Funds Transfer Information (May 1999)
Name: **Contracts Section**
Mailing Address: **Federal Highway Administration, 610 East Fifth Street, Vancouver, WA 98661-3801**
Telephone Number: **360.619.7520**
Person to Contact: **Julee McTaggart**
Electronic Address: **contracts@mail.wfl.fhwa.dot.gov**

- 52.233-1 Disputes (July 2002) - Alternate 1 (Dec 1991)
- 52.233-3 Protest After Award (Aug 1996)
- 52.233-4 Applicable Law for Breach of Contract Claim (Oct 2004)
- 52.236-1 Performance of Work by the Contractor (Apr 1984)
(NOTE: This clause does not apply when award is made to other than the low bidder after applying the price evaluation preference for HUBZone small business concerns under FAR clause 52.219-4, in which case the percentage at SCR 108.02A will control.)
The Contractor shall perform on the site, and with its own organization, work equivalent to at least sixty-five (65) percent of the total amount of work to be performed under the contract.
- 52.236-2 Differing Site Conditions (Apr 1984)
- 52.236-3 Site Investigation and Conditions Affecting the Work (Apr 1984)
- 52.236-5 Material and Workmanship (Apr 1984)
- 52.236-6 Superintendence by the Contractor (Apr 1984)
- 52.236-7 Permits and Responsibilities (Nov 1991)
- 52.236-8 Other Contracts (Apr 1984)
- 52.236-9 Protection of Existing Vegetation, Structures, Equipment, Utilities and Improvements (Apr 1984)
- 52.236-10 Operations and Storage Areas (Apr 1984)
- 52.236-11 Use and Possession Prior to Completion (Apr 1984)
- 52.236-12 Cleaning up (Apr 1984)
- 52.236-13 Accident Prevention (Nov 1991) - Alternate 1 (Nov 1991)
- 52.236-15 Schedules for Construction Contracts (Apr 1984)
- 52.236-17 Layout of Work (Apr 1984)
- 52.236-21 Specifications and Drawings for Construction (Feb 1997) Alt II (Apr 1984)
- 52.236-26 Preconstruction Conference (Feb 1995)
- 52.242-13 Bankruptcy (Jul 1995)
- 52.242-14 Suspension of Work (Apr 1984)
- 52.243-4 Changes (June 2007)
- 52.244-2 Subcontracts (June 2007)
- 52.244-6 Subcontracts for Commercial Items (Sep 2006)
- 52.246-12 Inspection of Construction (Aug 1996)
- 52.247-64 Preference for Privately Owned U.S. Flag Commercial Vessels (Feb 2006)
- 52.248-3 Value Engineering-Construction (Sep 2006) Alternate 1 (Apr 1984)
- 52.249-2 Termination for Convenience of the Government (Fixed Price) (May 2004)-- Alternate 1 (Sep 1996)
- 52.249-10 Default (Fixed-Price Construction) (Apr 1984)
- 52.253-1 Computer Generated Forms (Jan 1991)
- 1252.211-70 Index for Specifications (Apr 2005)
- 1252.223-73 Seat Belt Use Policies and Programs (Apr 2005)
- 1252.228-73 Notification of Miller Act Payment Bond Protection (Apr 2005)
(c) The surety which has provided the payment bond under the prime contract is:

(Name)

(Street Address)

(City, State, Zip Code)

(Contact & Telephone number)
- 1252.242-73 Contracting Officer's Technical Representative (Oct 1994)

2. Full Text Clauses

52.204-1 Approval of Contract (Dec 1989)

This contract is subject to the written approval of the Western Federal Lands' Division Engineer (or delegate) or one level above the Contracting Officer, and shall not be binding until so approved.

52.211-10 Commencement, Prosecution, and Completion of Work (Apr 1984) Alternate I (Apr 1984)

The Contractor shall be required to (a) commence work under this contract within 10 calendar days after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than **April 1, 2009 for the Base schedule, which date shall be extended in accordance with Subsection 108.01 upon exercise of any option** subject to such extensions as may be authorized. The time stated for completion shall include final cleanup of the premises.

The completion date is based on the assumption that the successful offeror will receive the notice to proceed **by June 26, 2008**. The completion date will be extended by the number of calendar days after the above date that the contractor receives the notice to proceed, except to the extent that the delay in issuance of the notice to proceed results from the failure of the contractor to execute the contract and give the required performance and payment bonds within the time specified in the offer.

52.219-28 Post-Award Small Business Program Re-Representation (June 2007)

(a) *Definitions.* As used in this clause –

“Long term contract” means a contract of more than five years in duration, including options. However, the term does not include contracts that exceed five years in duration because the period of performance has been extended for a cumulative period not to exceed six months under the clause 52.217-8, Option to Extend Services, or other appropriate authority.

“Small business concern” means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR part 121 and the size standard in paragraph (c) of this clause.

(b) If the Contractor represented that it was a small business concern prior to award of this contract, the Contractor shall re-represent its size status according to paragraph (e) of this clause or, if applicable, paragraph (g) of this clause, upon the occurrence of any of the following:

(1) Within 30 days after execution of a novation agreement or within 30 days after modification of the contract to include this clause, if the novation agreement was executed prior to inclusion of this clause in the contract.

(2) Within 30 days after a merger or acquisition that does not require a novation or within 30 days after modification of the contract to include this clause, if the merger or acquisition occurred prior to inclusion of this clause in the contract.

(3) For long-term contracts ---

(i) Within 60 to 120 days prior to the end of the fifth year of the contract; and

(ii) Within 60 to 120 days prior to the exercise date specified in the contract for any option thereafter.

(c) The Contractor shall re-represent its size status in accordance with the size standard in effect at the time of this re-representation that corresponds to the North American Industry Classification System (NAICS) code assigned to this contract. The small business size standard corresponding to this NAICS code can be found at <http://www.sba.gov/services/contractingopportunities/sizestandardsttopics/>.

(d) The small business size standard for a Contractor providing a product which it does not manufacture itself, for a contract other than a construction or service contract, is 500 employees.

(e) Except as provided in paragraph (g) of this clause, the Contractor shall make the re-representation required by paragraph (b) of this clause by validating or updating all its representations in the Online Representations and Certifications Application and its data in the Central Contractor Registration, as necessary, to ensure they reflect current status. The Contractor shall notify the contracting office by email, or otherwise in writing, that the data have been validated or updated, and provide the date of the validation or update.

(f) If the Contractor represented that it was other than a small business concern prior to award of this contract, the Contractor may, but is not required to, take the actions required by paragraphs (e) or (g) of this clause,

(g) If the Contractor does not have representations and certifications in ORCA, or does not have a representation in ORCA for the NAICS code applicable to this contract, the Contractor is required to complete the following re-representation and submit it to the contracting office, along with the contract number and the date on which the re-representation was completed:

(NOTE: Do not complete this clause at time of initial offer/bid.)

The Contractor represents that it is is not a small business concern under NAICS Code 237310 (Highway/Bridge construction) assigned to contract number _____.

Name: _____

Title: _____

Date: _____ Signature: _____

[Contractor to sign and date and insert authorized signer's name and title.]

52.222-39 Notification of Employee Rights Concerning Payment of Union Dues or Fees (Dec 2004)

(a) *Definition.* As used in this clause—

“United States” means the 50 States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, and Wake Island.

(b) Except as provided in paragraph (e) of this clause, during the term of this contract, the Contractor shall post a notice, in the form of a poster, informing employees of their rights concerning union membership and payment of union dues and fees, in conspicuous places in and about all its plants and offices, including all places where notices to employees are customarily posted. The notice shall include the following information (except that the information pertaining to National Labor Relations Board shall not be included in notices posted in the plants or offices of carriers subject to the Railway Labor Act, as amended (45 U.S.C. 151-188)).

Notice to Employees

Under Federal law, employees cannot be required to join a union or maintain membership in a union in order to retain their jobs. Under certain conditions, the law permits a union and an employer to enter into a union-security agreement requiring employees to pay uniform periodic dues and initiation fees. However, employees who are not union members can object to the use of their payments for certain purposes and can only be required to pay their share of union costs relating to collective bargaining, contract administration, and grievance adjustment.

If you do not want to pay that portion of dues or fees used to support activities not related to collective bargaining, contract administration, or grievance adjustment, you are entitled to an appropriate reduction in your payment. If you believe that you have been required to pay dues or fees used in part to support activities not related to collective bargaining, contract administration, or grievance adjustment, you may be entitled to a refund and to an appropriate reduction in future payments.

For further information concerning your rights, you may wish to contact the National Labor Relations Board (NLRB) either at one of its Regional offices or at the following address or toll free number:

National Labor Relations Board
Division of Information
1099 14th Street, N.W.
Washington, DC 20570
1-866-667-6572
1-866-316-6572 (TTY)

To locate the nearest NLRB office, see NLRB's website at <http://www.nlr.gov>.

(c) The Contractor shall comply with all provisions of Executive Order 13201 of February 17, 2001, and related implementing regulations at 29 CFR Part 470, and orders of the Secretary of Labor.

(d) In the event that the Contractor does not comply with any of the requirements set forth in paragraphs (b), (c), or (g), the Secretary may direct that this contract be cancelled, terminated, or suspended in whole or in part, and declare the Contractor ineligible for further Government contracts in accordance with procedures at 29 CFR Part 470, Subpart B—Compliance Evaluations, Complaint Investigations and Enforcement Procedures. Such other sanctions or remedies may be imposed as are provided by 29 CFR Part 470, which implements Executive Order 13201, or as are otherwise provided by law.

(e) The requirement to post the employee notice in paragraph (b) does not apply to—

- (1) Contractors and subcontractors that employ fewer than 15 persons;
- (2) Contractor establishments or construction work sites where no union has been formally recognized by the Contractor or certified as the exclusive bargaining representative of the Contractor's employees;
- (3) Contractor establishments or construction work sites located in a jurisdiction named in the definition of the United States in which the law of that jurisdiction forbids enforcement of union-security agreements;
- (4) Contractor facilities where upon the written request of the Contractor, the Department of Labor Deputy Assistant Secretary for Labor-Management Programs has waived the posting requirements with respect to any of the Contractor's facilities if the Deputy Assistant Secretary finds that the Contractor has demonstrated that—
 - (i) The facility is in all respects separate and distinct from activities of the Contractor related to the performance of a contract; and
 - (ii) Such a waiver will not interfere with or impede the effectuation of the Executive order; or
- (5) Work outside the United States that does not involve the recruitment or employment of workers within the United States.

(f) The Department of Labor publishes the official employee notice in two variations; one for contractors covered by the Railway Labor Act and a second for all other contractors. The Contractor shall—

- (1) Obtain the required employee notice poster from the Division of Interpretations and Standards, Office of Labor-Management Standards, U.S. Department of Labor, 200 Constitution Avenue, NW, Room N-5605, Washington, DC 20210, or from any field office of the Department's Office of Labor-Management Standards or Office of Federal Contract Compliance Programs;
- (2) Download a copy of the poster from the Office of Labor-Management Standards website at <http://www.olms.dol.gov>; or
- (3) Reproduce and use exact duplicate copies of the Department of Labor's official poster.

(g) The Contractor shall include the substance of this clause in every subcontract or purchase order that exceeds the simplified acquisition threshold, entered into in connection with this contract, unless

exempted by the Department of Labor Deputy Assistant Secretary for Labor-Management Programs on account of special circumstances in the national interest under authority of 29 CFR 470.3(c). For indefinite quantity subcontracts, the Contractor shall include the substance of this clause if the value of orders in any calendar year of the subcontract is expected to exceed the simplified acquisition threshold. Pursuant to 29 CFR Part 470, Subpart B—Compliance Evaluations, Complaint Investigations and Enforcement Procedures, the Secretary of Labor may direct the Contractor to take such action in the enforcement of these regulations, including the imposition of sanctions for noncompliance with respect to any such subcontract or purchase order. If the Contractor becomes involved in litigation with a subcontractor or vendor, or is threatened with such involvement, as a result of such direction, the Contractor may request the United States, through the Secretary of Labor, to enter into such litigation to protect the interests of the United States.

52.225-9 Buy American Act—Construction Materials (Jan 2005)

(a) *Definitions.* As used in this clause—

“Component” means an article, material, or supply incorporated directly into a construction material.

“Construction material” means an article, material, or supply brought to the construction site by the Contractor or a subcontractor for incorporation into the building or work. The term also includes an item brought to the site preassembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, that are discrete systems incorporated into a public building or work and that are produced as complete systems, are evaluated as a single and distinct construction material regardless of when or how the individual parts or components of those systems are delivered to the construction site. Materials purchased directly by the Government are supplies, not construction material.

“Cost of components” means—

(1) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the construction material (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or

(2) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the construction material.

“Domestic construction material” means—

(1) An unmanufactured construction material mined or produced in the United States; or

(2) A construction material manufactured in the United States, if the cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind for which nonavailability determinations have been made are treated as domestic.

“Foreign construction material” means a construction material other than a domestic construction material.

“United States” means the 50 States, the District of Columbia, and outlying areas.

(b) Domestic preference.

(1) This clause implements the Buy American Act (41 U.S.C. 10a - 10d) by providing a preference for domestic construction material. The Contractor shall use only domestic construction material in performing this contract, except as provided in paragraphs (b)(2) and (b)(3) of this clause.

(2) This requirement does not apply to the construction material or components listed by the Government as follows:

None.

(3) The Contracting Officer may add other foreign construction material to the list in paragraph (b)(2) of this clause if the Government determines that—

(i) The cost of domestic construction material would be unreasonable. The cost of a particular domestic construction material subject to the requirements of the Buy American Act is unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent;

(ii) The application of the restriction of the Buy American Act to a particular construction material would be impracticable or inconsistent with the public interest; or

(iii) The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.

(c) Request for determination of inapplicability of the Buy American Act.

(1) (i) Any Contractor request to use foreign construction material in accordance with paragraph (b)(3) of this clause shall include adequate information for Government evaluation of the request, including—

(A) A description of the foreign and domestic construction materials;

(B) Unit of measure;

(C) Quantity;

(D) Price;

(E) Time of delivery or availability;

(F) Location of the construction project;

(G) Name and address of the proposed supplier; and

(H) A detailed justification of the reason for use of foreign construction materials cited in accordance with paragraph (b)(3) of this clause.

(ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed price comparison table in the format in paragraph (d) of this clause.

(iii) The price of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate may be issued).

(iv) Any Contractor request for a determination submitted after contract award shall explain why the Contractor could not reasonably foresee the need for such determination and could not have requested the determination before contract award. If the Contractor does not submit a satisfactory explanation, the Contracting Officer need not make a determination.

(2) If the Government determines after contract award that an exception to the Buy American Act applies and the Contracting Officer and the Contractor negotiate adequate consideration, the Contracting Officer will modify the contract to allow use of the foreign construction material. However, when the basis for the exception is the unreasonable price of a domestic construction material, adequate consideration is not less than the differential established in paragraph (b)(3)(i) of this clause.

(3) Unless the Government determines that an exception to the Buy American Act applies, use of foreign construction material is noncompliant with the Buy American Act.

(d) *Data*. To permit evaluation of requests under paragraph (c) of this clause based on unreasonable cost, the Contractor shall include the following information and any applicable supporting data based on the survey of suppliers:

Foreign and Domestic Construction Materials Price Comparison

<u>Construction Material</u>	<u>Unit of Measure</u>	<u>Quantity</u>	<u>Price (Dollars)*</u>
Description			
<i>Item 1:</i>			
Foreign construction material	_____	_____	_____
Domestic construction material	_____	_____	_____

Item 2:

Foreign construction material

_____	_____	_____
_____	_____	_____

Domestic construction material

[List name, address, telephone number, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.]

[Include other applicable supporting information.]

[Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued).]*

RESERVED

AREA 2: Big Horn, Carbon, Carter, Custer, Dawson, Fallon, Garfield, Golden Valley, Musselshell, Powder River, Prairie, Rosebud, Stillwater, Treasure, Wibaux, and Yellowstone counties

AREA 3: Blaine, Cascade, Chouteau, Daniels, Fergus, Glacier, Hill, Judith Basin, Liberty, McCone, Petroleum, Pondera, Phillips, Richland, Roosevelt, Sheridan, Teton, Toole, Valley, and Wheatland Counties

AREA 4: Broadwater, Lewis and Clark, and Meagher Counties

AREA 5: Flathead, Lake, Lincoln, Mineral, Missoula, Ravalli, and Sanders Counties

AREA 6: Gallatin, Park, and Sweet Grass Counties

Ironworker

Flathead, Glacier, Lake, Lincoln, Mineral, Missoula and Sanders Cos.....	\$ 24.80	13.71
Remaining Counties.....	\$ 23.15	13.71

Laborers:

Group 1.....	\$ 16.37	6.75
Group 2.....	\$ 19.07	6.75
Group 3.....	\$ 19.26	6.75
Group 4.....	\$ 20.13	6.75

LABORERS CLASSIFICATIONS

GROUP 1: Flag person

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

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GROUP 3: Concrete Vibrator; Dumpman (Grademan); Equipment Handler; Geotextile and Liners; High-Pressure Nozzlemen; 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

Line Construction

Equipment Operator.....	\$ 19.16	5.05
Groundman.....	\$ 15.40	5.05

Painters:.....\$ 23.00 8.00

Pavement Marking/Milling and related work. Includes operating marking and all other equipment and all work involved in traffic marking including removal, surface preparation and 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..

Power Equipment Operator

Group 1.....	\$ 20.52	8.00
Group 2.....	\$ 22.48	8.00
Group 3.....	\$ 23.31	8.00
Group 4.....	\$ 23.98	8.00
Group 5.....	\$ 25.28	8.00
Group 6.....	\$ 25.94	8.00
Group 7.....	\$ 27.97	8.00

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: A-Frame Truck Crane; Air Compressor; Auto Fine Grader; Belt Finishing Machine; Boring Machine (small); Cement Silo, Crane; Crusher Conveyor, DW-10, 15, and 20 Tractor Roller; Farm Tractor; Forklift; Form-Grader; Front-end Loader under 1 cu yd; Oiler, Heavy Duty Drills; Pumpman; Oiler (All, except Cranes and Shovels)

GROUP 2: Air Doctor; Backhoe/Excavator/Shovel to & incl 3 cu yd Bit Grinder; Bituminous Paving Travel Plant; Boring Machine, large: Broom, Self-Propelled; Concrete Bucket Dispatcher; Concrete Conveyor; Concrete Finish Machine; Concrete Float and Spreader; Concrete Travel Batcher; Distributor; Dozer, Rubber tired, Push, and Side Boom; Drills, Heavy Duty (all types); Elevating Grader/Gradall; Field

Wage Determinations

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Equipment Serviceman; Front-end Loader 1 cu yd to and incl. 5 cu yd; Grade Setter; 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; Rollers (All except Asphalt Finish and Breakdown); Ross Carrier; Rotomill under 6 ft; Trenching Machine; Washing/Screening Plant

GROUP 3: Asphalt Finish Roller; Asphalt Breakdown Roller; Asphalt Paving Machine; Backhoe/Excavator/Shovel larger than 3 cu yd; Asphalt Screed; Concrete Batch Plant; Cableway Highline; Concrete Curing Machine; Cranes, 24 tons & under; Cranes, Creter; Cranes, Electric Overhead; Concrete Pump; Curb Machine/Slip Form Paver; Finish Dozer; Mechanic/Welder; Pioneer Dozer; Rotomill 6 ft and over; Scraper, Single Engine; Scraper Twin or pulling Belly Dump; Yo Yo Cat Front-end Loader over 5 cu yd;

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

SPECIAL OPERATORS:

GROUP 5: Cranes, 45 tons to and including 74 tons

GROUP 6: Cranes, 75 tons to and including 149 tons

GROUP 7: Cranes, 150 tons to and including 250 tons; Cranes over 250 tons: add \$1.00 for every 100 tons over 250 tons; Crane, Stiff-Leg or Derrick; Crane, Tower all); Crane, Whirley (all); Helicopter Hoist

Truck drivers:

Group 1.....	\$ 17.76	7.75
Group 2.....	\$ 22.73	7.75

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

Wage Determinations

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Mechanic; Trucks with Power Equipment; Warehouseman, Partsman,
Cardex and Warehouse Expeditor; Water Trucks

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

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)).

In the listing above, the "SU" designation means that rates
listed under the identifier do not reflect collectively
bargained wage and fringe benefit rates. Other designations
indicate unions whose rates have been determined to be
prevailing.

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 Determinations
MT OMAD 18(41), Minuteman Missile Base Roads

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

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Section 101.— TERMS, FORMAT, AND DEFINITIONS

101.01 Meaning of Terms. These specifications are generally written in the imperative mood. In sentences using the imperative mood, the subject, “*the Contractor*,” is implied. Also implied in this language are “*shall*,” “*shall be*,” or similar words and phrases. In material specifications, the subject may also be the supplier, fabricator, or manufacturer supplying material, products, or equipment for use on the project.

Wherever “*directed*,” “*required*,” “*prescribed*,” or other similar words are used, the “*direction*,” “*requirement*,” or “*order*” of the Contracting Officer is intended. Similarly, wherever “*approved*,” “*acceptable*,” “*suitable*,” “*satisfactory*,” or similar words are used, the words mean “*approved by*” “*acceptable to*,” or “*satisfactory to*” the Contracting Officer.

The word “*will*” generally pertains to decisions or actions of the Contracting Officer.

101.02 Specifications Format. These specifications are divided into 10 Divisions.

Division 100 consists of general contract requirements for which no direct payment is made. The requirements contained in Division 100 are applicable to all contracts.

Division 150 consists of project contract requirements that are applicable to all contracts. Work under Division 150 is paid for directly or indirectly according to Subsection 109.05 and the Section ordering the work. When there is no pay item in the bid schedule, no direct payment is made.

Divisions 200 through 600 consist of construction contract requirements for specific items of work. Work under these Divisions is paid for directly or indirectly according to Subsection 109.05 and the Section ordering the work. When there is no pay item in the bid schedule, no direct payment is made.

Division 700 contains the material requirements for Divisions 150 through 600. No direct payment is made in Division 700. Payment for material is included as part of the work required in Divisions 150 through 600.

The first three digits of the pay item number in the Bid Schedule identify the Section under which the work is performed.

101.03 Abbreviations. Whenever these abbreviations are used in the specifications, they represent the following:

(a) Acronyms.

AA — Aluminum Association

AAN — American Association of Nurserymen

AAR — Association of American Railroads

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AASHTO — American Association of State Highway and Transportation Officials
ACI — American Concrete Institute
ACPA — American Concrete Pavement Association
ADA — Americans with Disabilities Act
AGC — Associated General Contractors of America
AI — Asphalt Institute
AIA — American Institute of Architects
AISC — American Institute of Steel Construction
AISI — American Iron and Steel Institute
AITC — American Institute of Timber Construction
ANSI — American National Standards Institute
APWA — American Public Works Association
ARA — American Railway Association
AREA — American Railway Engineering Association
ARTBA — American Road and Transportation Builders Association
ASCE — American Society of Civil Engineers
ASCII — American Standard Code for Information Interchange
ASLA — American Society of Landscape Architects
ASTM — American Society for Testing and Materials
ATSSA — American Traffic Safety Services Association
AWPA — American Wood Preservers Association
AWS — American Welding Society
AWWA — American Water Works Association
CFR — Code of Federal Regulations
CO — Contracting Officer and all representatives
CRSI — Concrete Reinforcing Steel Institute
FAR — Federal Acquisition Regulations (48 CFR Chapter 1)
FHWA — Federal Highway Administration
FICA — Federal Insurance Contributions Act
FLH — Federal Lands Highways
FSS — Federal Specifications and Standards

FTMS — Federal Test Method Standard
FUTA — Federal Unemployment Tax Act
GSA — General Services Administration
IEEE — Institute of Electrical and Electronic Engineers
ISO — International Organization for Standardization
ISSA — International Slurry Surfacing Association
ITE — Institute of Transportation Engineers
MIL — Military Specifications
MPI — Master Painters Institute
MUTCD — Manual on Uniform Traffic Control Devices (for Streets and Highways)
NCHRP — National Cooperative Highway Research Program
NEMA — National Electrical Manufacturer's Association
NFPA — National Forest Products Association
NIST — National Institute of Standards and Technology
OSHA — Occupational Safety and Health Administration
PCA — Portland Cement Association
PCI — Prestressed Concrete Institute
PVC — Polyvinyl Chloride
PTI — Post-Tensioning Institute
SAE — Society of Automotive Engineers
SF — Standard Form
SI — International System of Units
SSPC — Steel Structures Painting Council
TAR — Transportation Acquisition Regulations (48 CFR Chapter 12)
UL — Underwriter's Laboratory
U.S. — United States of America
USC — United States Code
USGS — United States Geological Survey
USPS — United States Postal Service

(b) Slope notation (vertical : horizontal). For slopes flatter than 1V:1H, express the slope as the ratio of one unit vertical to a number of units horizontal. For slopes steeper than 1V:1H, express the slope as the ratio of a number of units vertical to one unit horizontal.

101.04 Definitions. The following definitions apply to this contract:

Award — The written acceptance of a bid by the CO.

Backfill — Material used to replace or the act of replacing material removed during construction. Material placed or the act of placing material adjacent to structures.

Base — The layer or layers of material placed on a subbase or subgrade to support a surface course.

Bid — A written offer by a bidder to perform work at a quoted price.

Bidder — Any individual or legal entity submitting a bid.

Bid Guarantee — A form of security assuring that the bidder will not withdraw a bid within the period specified for acceptance and will execute a written contract and furnish required bonds.

Bid Schedule — The prepared schedule included with the bid forms, containing the estimated quantities of pay items for which unit bid prices are invited.

Bridge — A structure more than 20 feet long, including supports, spanning and providing passage over a depression, waterway, railroad, highway, or other obstruction.

Clear Zone — The portion of the roadside, including the shoulder, available for the safe use by an errant vehicle in which the driver may regain control of the vehicle. Recommended distances for the clear zone are in the AASHTO Roadside Design Guide.

Commercial Certification — See Subsection 106.03.

Construction Limits — The limits on each side of the project that establish the area disturbed by construction operations and beyond which no disturbance is permitted. Typically the construction limits are the same as the clearing limits, except when additional clearing is required.

Contract — The written agreement between the Government and the Contractor setting forth the obligations of the parties for the performance of and payment for the prescribed work.

Contracting Officer (CO) — An official of the Government with the authority to enter into, administer, and terminate contracts and make related determinations and findings. The term includes certain authorized representatives of the CO acting within the limits of their authority as delegated by the CO.

Contract Modification — Any written change in the terms of the contract. Contract modifications are of the following forms:

(a) **Administrative change.** A unilateral contract change, in writing, that does not affect the substantive rights of the parties (e.g., a change in the paying office or the appropriation data).

(b) **Change order.** A written order, signed by the CO, directing the Contractor to make a change that FAR Clause 52.243-4 Changes authorizes the CO to order without the Contractor's consent.

(c) **Supplemental agreement.** A contract modification that is accomplished by the mutual action of the parties.

Contractor — The individual or legal entity contracting with the Government for performance of prescribed work.

Contract Requirements — The specification applicable to this project.

Contract Time — The specified time allowed for completion of all contract work.

Crashworthy — A highway feature is crashworthy if it was successfully crash tested under the NCHRP Report 350, *Recommended Procedures for the Safety Performance Evaluation of Highway Features* or earlier comparable criteria or if it was accepted through analysis by FHWA, based on similarity to other crashworthy features. A list of crashworthy highway features is available on the FHWA Safety website.

Cross-Section — A vertical section of the ground or structure at right angles to the centerline or baseline of the roadway or other work.

Culvert — Any structure, not classified as a bridge, that provides an opening under the roadway.

Day — Each and every day shown on the calendar, beginning and ending at midnight.

Density — Mass per unit volume of material. Specific gravity multiplied by the unit mass of water.

Detour — A temporary rerouting of public traffic onto alternate existing roadways in order to avoid the work or part of the work.

Diversion — A temporary rerouting of public traffic onto a temporary alignment within the project limits in order to bypass the work or a portion of the work.

Drawings — Design sheets or fabrication, erection, or construction details submitted to the Government by the Contractor according to FAR Clause 52.236-21 Specifications and Drawings for Construction. Also refers to submissions and submittals.

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Government — The Government of the United States of America.

Highway, Street, or Road — A general term denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way.

Holidays — Holidays occur on the following days:

- 1st day of January - New Year's Day;
- 3rd Monday of January - Martin Luther King, Jr. Day;
- 3rd Monday in February – Presidents' Day;
- Last Monday in May - Memorial Day;
- 4th day of July – Independence Day;
- 1st Monday in September - Labor Day;
- 2nd Monday in October - Columbus Day;
- 11th day in November - Veterans Day;
- 4th Thursday in November - Thanksgiving Day;
- 25th day in December - Christmas Day;
- Other days declared holidays by the Congress or the President;
- If a holiday falls on a Saturday, the preceding Friday is also a legal holiday. If a holiday falls on a Sunday, the Monday following is also a legal holiday.

Layer — See “lift.”

Lift — Defined as follows:

(a) When placing and compacting soils and aggregates, a lift is any single, continuous layer of material that receives the same compactive effort throughout during a single work operation.

(b) When installing culvert pipe less than or equal to 48 inches in diameter, the backfill material placed on both sides of the pipe is considered to be contained in the same lift when the material is placed to the same elevation on both sides of the culvert, the compactive effort applied to one side of the culvert is the same as that applied to the other, and the compactive effort is applied to both sides of the pipe in a continuous operation.

Material — Any substances specified or necessary to satisfactorily complete the contract work.

Maximum Particle Size — The smallest sieve opening through which all particles in the material will pass.

Measurement — The process of identifying the dimensions, quantity, or capacity of an item. See Section 109 for measurement methods, terms, and definitions.

Notice to Proceed — Written notice to the Contractor to begin the contract work.

Pavement Structure — The combination of subbase, base, paving geotextiles, and surface courses placed on a subgrade to support and distribute the traffic load to the roadbed.

Pay Item — A specific item of work for which a unit and price is provided in the contract.

Payment Bond — The security executed by the Contractor and surety or sureties and furnished to the Government to ensure payments as required by law to all persons supplying labor or material according to the contract.

Performance Bond — The security executed by the Contractor and surety or sureties furnished to the Government to guarantee completion of the contract work.

Plans — The contract plans furnished by the Government showing the location, type, dimensions, and details of the work.

Production Certification — See Subsection 106.03.

Professional Engineer — Engineers who hold valid State licenses permitting them to offer engineering services directly to the public, who are experienced in the work for which they are responsible, who take legal responsibility for their engineering designs, and who are bound by a code of ethics to protect the public health.

Profile Grade — The trace of a vertical plane intersecting a particular surface of the proposed road construction located as shown on the plans, usually along the longitudinal centerline of the roadbed. Profile grade means either elevation or gradient of the trace according to the context.

Project — The specific section of the highway or other property on which construction is to be performed under the contract.

Right-of-Way — Real property necessary for the project, including roadway, buffer areas, access, and drainage areas.

Roadbed — The graded portion of a highway prepared as a foundation for the pavement structure and shoulders.

Roadside — All area within the right-of-way excluding the traveled way and shoulders.

Roadway — In general, the portion of a highway, including shoulders, for vehicular use. A divided highway has two or more roadways. In construction specifications, the portion of a highway within the construction limits.

Roadway Prism — The volume defined by the area between the original terrain cross-section and the final design cross-section multiplied by the horizontal distance along the centerline of the roadway.

Roller Pass — One trip of a roller in one direction over any one spot.

Shoulder — The portion of the roadway contiguous to the traveled way for accommodation of stopped vehicles, for emergency use, and for lateral support of the pavement structure.

Sieve — See AASHTO M 92.

Solicitation — The complete assembly of documents (whether attached or incorporated by reference) furnished to prospective bidders.

Specifications — The written requirements for performing work.

Standard Forms — Numbered forms issued by the General Services Administration for use as contract documents.

Standard Plans — Detailed plans approved for repetitive use and included as part of the plans.

Station — (1) A measure of distance used for highways and railroads. A station is equal to 100 feet. (2) A precise location along a survey line.

Structures — Bridges, culverts, catch basins, drop inlets, retaining walls, cribbing, manholes, endwalls, buildings, sewers, service pipes, underdrains, foundation drains, and other constructed features that may be encountered in the work.

Subbase — The layer or layers of material placed on a subgrade to support a base.

Subcontract — The written agreement between the Contractor and an individual or legal entity prescribing the performance of a specific portion of the work.

Subcontractor — An individual or legal entity with which the Contractor sublets part of the work. This includes all subcontractors in any tier.

Subgrade — The top surface of a roadbed upon which the pavement structure, shoulders, and curbs are constructed.

Substantial Completion — The point at which the project is complete such that it can be safely and effectively used by the public without further delays, disruption, or other impediments. For conventional bridge and highway work, the point at which all bridge deck, parapet, pavement structure, shoulder, drainage, sidewalk, permanent signing and markings, traffic barrier, safety appurtenance, utility, and lighting work is complete.

Substructure — All of the bridge below the bearings of simple and continuous spans, skewbacks of arches, and tops of footings of rigid frames including backwalls, wingwalls, and wing protection railings.

Suitable Material — Rock or earth material that will provide stable foundations, embankments, or roadbeds, and is reasonably free of organic matter, roots, muck, sod, or other detrimental material. Suitable material may require drying or adding water, root picking, and other methods of manipulation before use. Suitable material includes the classifications of materials for which the project was designed.

Superintendent — The Contractor's authorized representative in responsible charge of the work.

Superstructure — The entire bridge except the substructure.

Surety — An individual or corporation legally liable for the debt, default, or failure of a Contractor to satisfy a contract obligation.

Surface Course — The top layer or layers of a pavement structure designed to accommodate the traffic load and resist skidding, traffic abrasion, and weathering.

Target Value (TV) — A number established as a center for operating a given process. Once established, adjustments should be made in the process as necessary to maintain a central tendency about the target value. Test results obtained from a well-controlled process should cluster closely around the established target value and the mean of the test results should be equal to or nearly equal to the established target value.

Traveled Way — The portion of the roadway designated for the movement of vehicles, including curve widening, exclusive of shoulders.

Unsuitable Material — Material not capable of creating stable foundations, embankments, or roadbeds. Unsuitable material includes muck, sod, or soils with high organic contents.

Work — The furnishing of all labor, material, equipment, and other incidentals necessary to successfully complete the project according to the contract.

Section 102.— BID, AWARD, AND EXECUTION OF CONTRACT

102.01 Acquisition Regulations. Bid, award, and execution of the contract are governed by the FAR and TAR.

102.02 Preparation of Bids. Follow the requirements of FAR Clause 52.214-18 Preparation of Bids — Construction.

Execute and submit all required standard forms, bid schedules, and solicitation provisions contained in the solicitation as part of the bid.

Complete SF 1442, *Solicitation, Offer, and Award*, and sign as follows:

(a) Individuals. Sign your individual signature. For individuals doing business as a firm, follow the individual signature with the individual's typed, stamped, or printed name and the words, "*an individual doing business as _____ (name of firm) _____.*"

(b) Partnerships. Submit a list of all partners having authority to bind the partnership. One of the listed partners must sign on behalf of the partnership.

(c) Corporations. Sign in the corporate name, followed by the word "*by*" and the signature and title of the person authorized to sign. Submit evidence from the corporation that the person signing has authority to bind the corporation.

(d) Joint ventures. Submit a copy of the Joint Venture agreement. Sign the SF 1442 according to the Joint Venture agreement.

(e) Limited liability company. Sign in the company name, followed by the word "*by*" and the signature of the person authorized to sign. Submit evidence that the individual executing the document has authority to bind the company.

(f) Agents. When an agent signs, other than as stated in **(a)** through **(e)** above, furnish satisfactory evidence that the agent has authority to bind the bidder.

Insert a unit bid price, in figures, for each pay item for which a quantity appears in the bid schedule. Multiply the unit bid price by the quantity for each pay item and show the amount bid. Should any mathematical check made by the Government show a mistake in the amount bid, the corrected unit price extension shall govern.

When the words "*lump sum*" appear as a unit bid price, insert an amount bid for each lump sum pay item.

When the words “*contingent sum*” or a fixed rate appears as a unit bid price, include the Government inserted amount bid for the item in the total bid amount.

Total all of the amounts bid for each pay item and show the total bid amount.

The quantities shown in the bid schedule are approximate, unless designated as a contract quantity, and are used for the comparison of bids. Payment will be made for the actual quantities of work performed and accepted or material furnished according to the contract. The scheduled quantities may be increased, decreased, or deleted. Bid schedule quantities are considered the original contract quantities.

Submit bids for construction of the project under the Base Schedule and three options, designated Option A, Option B, and Option C. These schedules are not alternate bids. Complete all schedules.

The base schedule consists of all items of work for Roads E-02, L-02, M-06, and O-11..

Option A consists of all items of work for Road E-11.

Option B consists of all items of work for Road L-05.

Option C consists of all items of work for Road E-09 and N-09.

102.03 Bid Guarantee. Follow the requirements of FAR Clause 52.228-1 Bid Guarantee.

(a) General. Submit a bid guarantee of 20 percent of the total bid amount for all schedules or \$3 million, whichever is less. Submit the bid guarantee on SF 24, *Bid Bond*. If the bid guarantee is other than a corporate or individual surety, sign the SF 24 as the principal and make a statement on the form pledging the security. Make checks or money orders payable to the agency issuing the solicitation.

(b) Power of attorney. A corporate surety shall submit a current power of attorney for the signing agent or attorney-in-fact with each SF 24.

(c) Evidence of guarantee assistance. A surety that has a guarantee of assistance from the Small Business Administration shall submit a copy of its “*Surety Bond Guarantee Agreement*” with each SF 24. In addition, submit a power of attorney for the surety representative identified in the agreement.

102.04 Individual Surety. Follow the requirements of FAR Clause 52.228-11 Pledges of Assets.

Complete and date the SF 28, *Affidavit of Individual Surety*, after the solicitation date. The individual surety shall personally sign the SF 28. Execution by power of attorney is not acceptable. Bidders cannot serve as their own surety. Assets named shall be committed to the project with a bank designated to serve as trustee.

After reviewing the SF 28, the surety may be requested to provide further documentation with respect to any of its assets, debts, or encumbrances. The information may be required to be

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furnished under oath. Failure of the surety to respond with the requested documentation within 7 days of receipt of the request is cause for rejection of the surety.

Any material misstatement by the surety, overstatement of assets (either as to ownership or value) or understatement of liabilities is cause for rejection of the surety. Substitution of individual sureties to support a bid bond after the bid opening will not be permitted.

102.05 Public Opening of Bids. Bids will be publicly opened at the time specified in the SF 1442. Their contents will be made public information. The Government reserves the right to reject bids as set forth in the FAR, Part 14.

102.05A Contract Award. Follow the requirements of FAR Clause 52.214-19, Contract Award - Sealed Bidding - Construction.

This contract contains options for additional work. Acceptable bids must include pricing for Base, Option A, Option B and Option C schedules. The base schedule will be awarded upon execution of the contract. Any exercise of Option A, Option B and Option C or all will be made any time from contract award date through January 31, 2009.

The apparent low bidder will be determined by the lowest bid for the total of Base, Option A, Option B and Option C schedules. The successful offeror will be awarded all pay items in the Base schedule. The contract amount will be the bid total for the Base schedule. If the Government exercises Option A, Option B, Option C, or all; the contract amount will increase by the bid total for Option A schedule, Option B schedule, Option C schedule, or all schedules.

102.06 Performance and Payment Bonds. Follow the requirements of FAR Clause 52.228-15 Performance and Payment Bonds – Construction. Furnish a performance bond and a payment bond each in the penal amount of 100 percent of the original contract price.

Use SF 25, *Performance Bond*, and SF 25A, *Payment Bond*, for submitting the bonds.

The requirements contained in Subsections 102.03 and 102.04 relating to power of attorney, evidence of guarantee assistance, and individual sureties also apply to performance and payment bonds.

Section 103.— SCOPE OF WORK

103.01 Intent of Contract. The intent of the contract is to provide for the construction and completion of the work described. The precise details of performing the work are not stipulated except as considered essential for the successful completion of the work. Furnish all labor, material, equipment, tools, transportation, and supplies necessary to complete the work according to the contract.

Additional work on sites within or in the vicinity of the project may be requested by the CO. Such work generally will be in response to natural disasters. This paragraph does not affect the respective responsibilities of the parties under Subsection 107.06. Provide cost proposals and perform work as ordered by the CO.

103.02 Disputes. Follow the requirements of FAR Clause 52.233-1 Disputes.

When requesting a CO's decision on an interpretation of contract terms for the recovery of increased costs, quantify the amount and, if required by FAR Clause 52.233-1, certify the amount. Include an explanation of the interpretation of contract terms, the contract clause under which the claim is made, all supporting documentation, and adequate cost data to support the amount claimed.

103.03 Value Engineering. Follow the requirements of FAR Clause 52.248-3 Value Engineering — Construction.

Before undertaking significant expenditures, provide the CO with a written description of the value engineering change proposal (VECP) concept. Within 14 days, the CO will inform the Contractor as to whether the concept appears to be viable or if the concept is unacceptable. If the CO indicates that the concept appears to be viable, prepare and submit the formal VECP proposal.

103.04 Contractor Records. Upon request, provide records related to the contract to the Government for up to 3 years after final payment and for longer periods as provided by law.

Include a provision in all subcontracts at all tiers giving the Government the same rights as provided above with respect to the subcontractor's records.

103.05 Reserved

103.06 Issue Resolution. Resolve project issues at the lowest authorized level and in the most expedient manner possible. Escalate unresolved issues to the next higher level in a timely manner to avoid adverse impacts to costs, risks, or time. Either party may request an issue be escalated. Submit requests in writing. Upon the request of either party, both parties must escalate the issue. An exception to escalating an issue may be observed when both parties agree extra time is needed for the development of facts.

Decision making is encouraged to be made at the lowest authorized level. Recommendations, options, and ideas by all team members are requested. Decisions made at the lowest level possible will be supported by all management levels. Countermands of decisions will not be permitted, except where there is a conflict with code, regulation, law, the contract, or a change of critical facts or information which causes a re-evaluation of the resolution. Support of a countermand by the original decision team is critical. All Contractor and Government team members must understand why the change is necessary and must be able to support it.

Section 104.— CONTROL OF WORK

104.01 Authority of the Contracting Officer (CO). The CO may delegate authority to representatives to decide on acceptability of work, progress of work, suspension of work, interpretation of the contract, and acceptable fulfillment of the contract. The term “CO” includes all authorized representatives of the CO, including inspectors, acting within the limits of their authority as delegated by the CO.

104.02 Authority of Inspectors. Inspectors are authorized to inspect all work including the preparation, fabrication, or manufacture of material for the project. The inspector is not authorized to alter or waive contract requirements, issue instruction contrary to the contract, act as foreman for the Contractor, or direct the Contractor’s operations. The inspector has authority to identify non-conforming work until the issue can be referred to and decided by the CO. The inspector may take necessary action to prevent imminent and substantial risk of death or injury including stopping work.

104.03 Specifications and Drawings. Follow the requirements of FAR Clause 52.236-21 Specifications and Drawings for Construction.

(a) Reserved.

(b) Reserved.

(c) As-built working drawings. Furnish as-built working drawings to the Government. The Government will provide one set of contract drawings to be used exclusively for recording the as-built details of the project. Use red pencil or red ink to record the information described below.

Note all additions or revisions to the location, character, and dimensions of the prescribed work shown on the contract drawings. Line out all details shown that are not applicable to the completed work. Check off details shown that were incorporated into the completed work without change.

Retain the drawings at the project site and, as work progresses, continuously update them to reflect the as-built details. Upon request, make the drawings available to the CO to review for compliance with these specifications.

As a minimum, show revisions in dimensions and material to the typical section on the as-built drawings.

Furnish the as-built working drawings to the CO before the final inspection. Correct all details found during the final inspection that are not shown on the as-built drawings and return to the CO within 5 working days.

104.04 Coordination of Contract Documents. The FAR, TAR, contract requirements, and plans are contract documents. A requirement in one document is binding as though occurring in all the contract documents. The contract documents are intended to be complementary and to describe and provide for a complete contract. In case of discrepancy, calculated and shown dimensions govern over scaled dimensions. The contract documents govern in the following order:

- (a) Federal Acquisition Regulations;
- (b) Transportation Acquisition Regulations;
- (c) Contract requirements; and
- (d) Plans.

104.05 Load Restrictions. Follow the requirements of FAR Clause 52.236-10 Operations and Storage Areas, paragraph (c).

Comply with all legal load restrictions when hauling material and equipment on public roads to and from the project. A special permit does not relieve the Contractor of liability for damage resulting from the moving of material or equipment.

Unless otherwise permitted, do not operate equipment or vehicles that exceed the legal load limits over new or existing structures, or pavements within the project except those pavements intended to be removed.

Section 105.— CONTROL OF MATERIAL

105.01 Source of Supply and Quality Requirements. Follow the requirements of FAR Clause 52.236-5 Material and Workmanship.

Select sources and provide acceptable material. Notify the CO of all proposed sources before delivery to the project to expedite material inspection and testing. Do not incorporate material requiring submittal into the work until approved.

Material may be approved at the source of supply before delivery to the project. Approval does not constitute acceptance. If an approved source does not continue to supply acceptable material during the life of the project, further use of that source may be denied.

105.02 Material Sources. The Contractor is responsible for locating sources, including established commercial sources. Use sources that fulfill the contract quantity and quality requirements. Determine the quantity and types of equipment and work necessary to select and produce acceptable material. Secure all permits and clearances for use of the source and provide copies of the documents. Obtain permits and clearances according to Subsection 107.10.

Provide laboratory test reports and available historical performance data indicating that acceptable material is available from the source. Do not use material from a source that is unacceptable to the Government. Dispose of unacceptable material and locate another source at no cost to the Government.

105.03 Material Source Management. Notify the CO 14 days before starting pit operations. Develop and operate within a material source according to the accepted plan of operation or written agreement for developing the source.

Comply with the following applicable requirements:

(a) Before developing a material source, measure the sediment content of bodies of water adjacent to the work area that will receive drainage from the work area. Control all erosion so the sediment levels in the bodies of water within the drainage area of the work area do not increase.

(b) Provide identification of source locations and haul routes to the CO at the Preconstruction Conference. The Counties may assess fees or weight limits for hauling over improved roads outside of the project road limits. Coordinate the selection of haul routes with the Counties.

105.04 Storing and Handling Material. Store and handle material to preserve its quality and fitness for the work. Stored material approved before storage may again be inspected before use in the work. Locate stored material to facilitate prompt inspection.

Use portions of the right-of-way approved by the CO for staging or storing of materials such as culverts, geotextile fabric, temporary traffic control devices; and for equipment parking.

Provide additional space as needed. Do not use private property for staging or storage without written permission of the owner or lessee. Furnish copies of all agreements. Secure all permits and clearances for use of the storage area and provide copies of the documents. Obtain permits according to Subsection 107.10. Restore all Government-provided storage sites to their original condition.

The Contractor is responsible for the security of all stored material.

Section 106.— ACCEPTANCE OF WORK

106.01 Conformity with Contract Requirements. Follow the requirements of FAR Clause 52.246-12 Inspection of Construction.

References to standard test methods of AASHTO, ASTM, GSA, and other recognized standard authorities refer to the methods in effect on the date of solicitation for bids. Use the 26th edition of the AASHTO Standard Specifications for Transportation Materials and Methods of Sampling and Testing, and Appendix A and B of the Federal Lands Highway Field Materials Manual for this project. Use the modified AASHTO procedures for sampling and testing contained in Appendix B of the Federal Lands Highway Field Materials Manual; except, when a specified sampling or test method is not included in Appendix B, sample and test according to the referenced AASHTO test procedure. Appendix A of the Federal Lands Highway Field Materials Manual contains several sampling and testing methods which may be required for this project that are not found in AASHTO.

Perform all work to the lines, grades, cross-sections, dimensions, and processes or material requirements shown in the contract documents.

Incorporate manufactured materials into the work according to the manufacturer's recommendations or to these specifications, whichever is stricter.

Plan dimensions and contract specification values are the values to be strived for and complied with as the design values from which any deviations are allowed. Perform work and provide material that is uniform in character and reasonably close to the prescribed value or within the specified tolerance range. The purpose of a tolerance range is to accommodate occasional minor variations from the median zone that are unavoidable for practical reasons.

The Government may inspect, sample, or test all work at any time before final acceptance of the project. When the Government performs tests, copies of test reports will be furnished upon request. Government tests may or may not be performed at the work site. If Contractor testing is verified by Government testing, the Contractor's results may be used by the Government to evaluate work for acceptance. If the Contractor's testing is invalidated, the Government's test results will be the sole basis for acceptance. Do not rely on the availability of Government test results for process control.

Acceptable work conforming to the contract will be paid for at the contract unit bid price. Four methods of determining conformity and accepting work are described in Subsections 106.02 to 106.05 inclusive. The primary method of acceptance is specified in each Section of work. However, work may be rejected at any time it is found by any of the methods not to comply with the contract.

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Remove, repair, or replace work that does not conform to the contract, or to prevailing industry standards where no specific contract requirements are noted. Removing, repairing, or replacing work; providing temporary traffic control; and any other related work to accomplish conformity will be at no cost to the Government.

As an alternative to removal and replacement, the Contractor may submit a written request to:

- (a) Have the work accepted at a reduced price; or
- (b) Be given permission to perform corrective measures to bring the work into conformity.

The request must contain supporting rationale and documentation. Include references or data justifying the proposal based on an evaluation of test results, effect on service life, value of material or work, quality, aesthetics, and other tangible engineering basis. The CO will determine disposition of the nonconforming work.

Obtain copies of the following documents by going to our webpage at:

<http://www.wfl.fha.dot.gov/construction/cmr/>

- Appendices A and B of the Federal Lands Highway Field Materials Manual, dated 02/10/97;
- Standard WFLHD Method of Test for Accelerated Weathering of Aggregate by Use of Dimethyl Sulfoxide (DMSO);
- Highway Research Board Bulletin No. 319. “The Humphres Method of Granular Soils” (Subsection on 301.05), dated 1962;
- Field Note Samples, dated April 2004.

106.02 Visual Inspection. Acceptance is based on visual inspection of the work for compliance with the specific contract requirements. In the absence of specific contract requirements or tolerances, prevailing industry standards may be used.

106.03 Certification. For material manufactured off-site, use a manufacturer with an ISO 9000 certification or an effective testing and inspection system. Require the manufacturer to clearly mark the material or packaging with a unique product identification or specification standard to which it is produced.

Other than references in or to the FAR or Federal Law, when these Contract Specifications reference certifications; certificates; or certified documents, equipment, or individuals, these references are not certifications under Section 4301 of Public Law 104-106, National Defense Authorization Act for Fiscal Year 1996. These references refer to documentation of non-regulatory, peripheral contract requirements that are required to be validated by an individual or organization having unique knowledge or qualifications to perform such validation.

Maintain records of all required certifications according to Subsections 103.04, 153.04, and 154.04. Submit certifications to the CO.

Check certifications, prior to incorporating the materials into the work, to ensure that the requirements of the contract have been met. Mark the certifications with the following information: project name, project number, contract item number, item description, Contractor's signature, and date.

Material accepted by certification may be sampled and tested at any time. If found not in conformance with the contract, the material will be rejected whether in place or not.

One of the following certifications may be required:

(a) Production certification. Material requiring a production certification is identified in the Acceptance Subsection of each Section. Require the manufacturer to furnish a production certification for each shipment of material. Include the following with each production certification:

(1) Date and place of manufacture;

(2) Lot number or other means of cross-referencing to the manufacturer's inspection and testing system; and

(3) Substantiating evidence that the material conforms to the contract quality requirements as required by FAR 46.105(a)(4), including all of the following:

(a) Test results on material from the same lot and documentation of the inspection and testing system;

(b) A statement from the manufacturer that the material complies with all contract requirements; and

(c) Manufacturer's signature or other means of demonstrating accountability for the certification.

(b) Commercial certification. When a certification is required, but not a production certification, furnish one commercial certification for all similar material from the same manufacturer.

A commercial certification is a manufacturer's or Contractor's representation that the material complies with all contract requirements. The representation may be labels, catalog data, stamped specification standards, or supplier's certifications indicating the material is produced to a commercial standard or specification.

106.04 Measured or Tested Conformance. Provide all necessary production and processing of the work and control performance of the work so that all of the work complies with the contract requirements.

Results from inspection or testing shall have values within the specified tolerances or specification limits. When no tolerance values are identified in the contract, the work will be accepted based on customary manufacturing and construction tolerances.

106.05 Statistical Evaluation of Work and Determination of Pay Factor (Value of Work). Statistical evaluation of work is a method of analyzing inspection or test results to determine conformity with the contract requirements. The work will be accepted as follows:

(a) General. For work evaluated based on statistical evaluation, both the Government and Contractor assume some risk.

The Government's risk is the probability that work of a rejectable quality level is accepted. The Contractor's risk is either the probability that work produced at an acceptable quality level (AQL) is rejected (α) or the probability that the work produced at the AQL is accepted at less than the contract price (α_{100}).

Acceptable quality level is the lowest percentage of work within the specification limits that is considered acceptable for payment at contract price. There are 2 categories. Category I is based on an AQL of 95 percent. Category II is based on an AQL of 90 percent. In both cases, the Contractor's risk (α_{100}) is 5 percent and the risk of rejection (α) is significantly lower.

As an incentive to produce uniform quality work and to offset the Contractor's risk, a final payment greater than the contract price may be obtained under certain conditions.

The quality characteristics to be evaluated, lot size, sampling frequency, sampling location, test methods, specification limits, and category are as follows:

(1) Quality characteristics. The quality characteristics to be evaluated are listed in the Acceptance Subsection of each Section.

(2) Lot size. A lot is a discrete quantity of work to which the statistical evaluation procedure is applied. A lot normally represents the total quantity of work produced. More than one lot may occur if changes in the target values, material sources, or job-mix formula are requested in writing and approved.

(3) Sampling frequency. The frequency of sampling is listed in the Acceptance Subsection of each Section. The frequency rate shown normally results in a minimum of 5 samples. The minimum number required to perform a statistical evaluation is 3. The maximum obtainable pay factor with 3, 4, or 5 samples is 1.01. A minimum of 8 samples are required to obtain a 1.05 pay factor.

If the sampling frequencies and quantity of work would otherwise result in fewer than 8 samples, a written request is required to increase the sampling frequency to provide for a minimum of 8 samples. Provide the request to increase the sampling frequency at least 48 hours before beginning production. An increase in the sampling frequency may result in a reduced pay factor.

(4) Sampling location. The point of sampling is listed in the Acceptance Subsection of each Section. The exact location of sampling will be specified by the CO based on random numbers.

(5) Test methods. The test methods used to test the sample are listed in the Acceptance Subsection of each Section.

(6) Specification limits. The specification limits for the quality characteristics are listed in the contract provisions for the work in question.

(7) Category. The category for the quality characteristics to be analyzed is listed in the acceptance subsection of each Section.

(b) Acceptance. The work in the lot will be paid for at a final pay factor when all inspections or test results are completed and evaluated.

Before determining the final pay factor, the work may be incorporated into the project provided the current pay factor does not fall below 0.90. If a lot is concluded with fewer than 3 samples, the material will be evaluated under Subsection 106.04.

If the current pay factor of a lot falls below 0.90, terminate production. Production may resume after the Contractor takes effective and acceptable actions to improve the quality of the production.

A lot containing an unsatisfactory percentage of nonspecification material (less than 1.00 pay factor) is accepted provided the lowest single pay factor has not fallen into the reject portion of Table 106-2.

A lot containing an unsatisfactory percentage of nonspecification material with the lowest single pay factor falling into the reject portion of Table 106-2 is rejected. Remove all rejected material from the work.

When approved, it is permissible to voluntarily remove nonspecification material and replace it with new material to avoid or minimize a pay factor of less than 1.00. New material will be sampled, tested, and evaluated according to this Subsection.

Any quantity of material may be rejected based on visual inspection or test results. Do not incorporate rejected material in the work. The results of tests run on rejected material will be excluded from the lot.

(c) Statistical evaluation. The Variability-Unknown/Standard Deviation Method will be used to determine the estimated percentage of the lot that is within specification limits.

The number of significant figures used in the calculations will be according to AASHTO R 11, absolute method.

The estimated percentage of work that is within the specification limits for each quality characteristic will be determined as follows:

(1) Calculate the arithmetic mean (\bar{x}) of the test values: $\bar{x} = \frac{\sum x}{n}$

where: \sum = summation of

x = individual test value

n = total number of test values

(2) Calculate the standard deviation (s):

$$s = \sqrt{\frac{n\sum(x^2) - (\sum x)^2}{n(n-1)}}$$

where: $\sum(x^2)$ = summation of the squares of individual test values

$(\sum x)^2$ = summation of the individual test values squared

(3) Calculate the upper quality index (Q_U): $Q_U = \frac{USL - \bar{X}}{s}$

where: USL = upper specification limit

Note: The USL is equal to the contract specification limit or the target value plus the allowable deviation.

(4) Calculate the lower quality index (Q_L): $Q_L = \frac{\bar{X} - LSL}{s}$

where: LSL = lower specification limit

Note: The LSL is equal to the contract specification limit or the target value minus the allowable deviation.

(5) From Table 106-1, determine P_U (the estimated percentage of work within the USL). P_U corresponds to a given Q_U . If a USL is not specified, P_U is 100.

(6) From Table 106-1, determine P_L (the estimated percentage of work within the lot within the LSL). P_L corresponds to a given Q_L . If an LSL is not specified, P_L is 100.

(7) Calculate the total estimated percentage of work within the *USL* and *LSL*:

$$P_U + P_L - 100$$

(8) Repeat steps 1 through 7 for each quality characteristic listed for statistical evaluation.

(d) Pay factor determination (value of the work). The pay factor for a lot will be determined as follows:

(1) From Table 106-2, determine the pay factor for each quality characteristic using the total number of test values and the total estimated percentage within the specification limits from step (c)(7).

(2) When all quality characteristics for a lot are Category I, the lot pay factor is based on the lowest single pay factor for any Category I quality characteristic. The maximum obtainable pay factor is 1.05 (with a minimum of 8 test values).

(3) When quality characteristics for a lot are both Category I and II, the lot pay factor is based on the following:

(a) When all Category II quality characteristics are 1.00, the lot payment is based on the lowest single pay factor for all category I characteristics. The maximum obtainable pay factor is 1.05 (with a minimum of 8 test values).

**Table 106-1
Estimated Percent of Work Within Specification Limits**

Estimated Percent within Specification Limits (P _U or P _L)	Upper Quality Index Q _U or Lower Quality Index Q _L								
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10 to n=11	n=12 to n=14
100	1.16	1.49	1.72	1.88	1.99	2.07	2.13	2.20	2.28
99	-	1.46	1.64	1.75	1.82	1.88	1.91	1.96	2.01
98	-	1.43	1.58	1.66	1.72	1.75	1.78	1.81	1.84
97	1.15	1.40	1.52	1.59	1.63	1.66	1.68	1.71	1.73
96	-	1.37	1.47	1.52	1.56	1.58	1.60	1.62	1.64
95	1.14	1.34	1.42	1.47	1.49	1.51	1.52	1.54	1.55
94	-	1.31	1.38	1.41	1.43	1.45	1.46	1.47	1.48
93	1.13	1.28	1.33	1.36	1.38	1.39	1.40	1.41	1.41
92	1.12	1.25	1.29	1.31	1.33	1.33	1.34	1.35	1.35
91	1.11	1.22	1.25	1.27	1.28	1.28	1.29	1.29	1.30
90	1.10	1.19	1.21	1.23	1.23	1.24	1.24	1.24	1.25
89	1.09	1.16	1.18	1.18	1.19	1.19	1.19	1.19	1.20
88	1.07	1.13	1.14	1.14	1.15	1.15	1.15	1.15	1.15
87	1.06	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.11
86	1.04	1.07	1.07	1.07	1.07	1.06	1.06	1.06	1.06
85	1.03	1.04	1.03	1.03	1.03	1.03	1.02	1.02	1.02
84	1.01	1.01	1.00	0.99	0.99	0.99	0.99	0.98	0.98
83	0.99	0.98	0.97	0.96	0.95	0.95	0.95	0.95	0.94
82	0.97	0.95	0.93	0.92	0.92	0.92	0.91	0.91	0.91
81	0.95	0.92	0.90	0.89	0.88	0.88	0.88	0.87	0.87
80	0.93	0.89	0.87	0.86	0.85	0.85	0.84	0.84	0.84
79	0.91	0.86	0.84	0.82	0.82	0.81	0.81	0.81	0.80
78	0.88	0.83	0.81	0.79	0.79	0.78	0.78	0.77	0.77
77	0.86	0.80	0.77	0.76	0.75	0.75	0.74	0.74	0.74
76	0.83	0.77	0.74	0.73	0.72	0.72	0.71	0.71	0.70
75	0.81	0.74	0.71	0.70	0.69	0.69	0.68	0.68	0.67
74	0.78	0.71	0.68	0.67	0.67	0.65	0.65	0.65	0.64
73	0.75	0.68	0.65	0.64	0.63	0.62	0.62	0.62	0.61
72	0.73	0.65	0.62	0.61	0.60	0.59	0.59	0.59	0.58
71	0.70	0.62	0.59	0.58	0.57	0.57	0.56	0.56	0.55
70	0.67	0.59	0.56	0.55	0.54	0.54	0.53	0.53	0.52
69	0.64	0.56	0.53	0.52	0.51	0.51	0.50	0.50	0.50
68	0.61	0.53	0.50	0.49	0.48	0.48	0.48	0.47	0.47
67	0.58	0.50	0.47	0.46	0.45	0.45	0.45	0.44	0.44
66	0.55	0.47	0.45	0.43	0.43	0.42	0.42	0.42	0.41
65	0.51	0.44	0.42	0.40	0.40	0.39	0.39	0.39	0.38
64	0.48	0.41	0.39	0.38	0.37	0.37	0.36	0.36	0.36
63	0.45	0.38	0.36	0.35	0.34	0.34	0.34	0.33	0.33
62	0.41	0.35	0.33	0.32	0.32	0.31	0.31	0.31	0.30
61	0.38	0.30	0.30	0.30	0.29	0.28	0.28	0.28	0.28
60	0.34	0.28	0.28	0.25	0.25	0.25	0.25	0.25	0.25
59	0.31	0.27	0.25	0.23	0.23	0.23	0.23	0.23	0.23
58	0.30	0.25	0.23	0.20	0.20	0.20	0.20	0.20	0.20
57	0.25	0.20	0.18	0.18	0.18	0.18	0.18	0.18	0.18
56	0.20	0.18	0.16	0.15	0.15	0.15	0.15	0.15	0.15
55	0.18	0.15	0.13	0.13	0.13	0.13	0.13	0.13	0.13
54	0.15	0.13	0.10	0.10	0.10	0.10	0.10	0.10	0.10
53	0.10	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.08
52	0.08	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
51	0.05	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: If the value of Q_U or Q_L does not correspond to a value in the table, use the next lower Q value.
If Q_U or Q_L are negative values, P_U or P_L is equal to 100 minus the table value for P_U or P_L.

(continued)

Table 106-1 (continued)
Estimated Percent of Work Within Specification Limits

Estimated Percent within Specification Limits (P _U or P _L)	Upper Quality Index Q _U or Lower Quality Index Q _L					
	n=15 to n=17	n=18 to n=22	n=23 to n=29	n=30 to n=42	n=43 to n=66	n=67 to ∞
100	2.34	2.39	2.44	2.48	2.51	2.56
99	2.04	2.07	2.09	2.12	2.14	2.16
98	1.87	1.89	1.91	1.93	1.94	1.95
97	1.75	1.76	1.78	1.79	1.80	1.81
96	1.65	1.66	1.67	1.68	1.69	1.70
95	1.56	1.57	1.58	1.59	1.59	1.60
94	1.49	1.50	1.50	1.51	1.51	1.52
93	1.42	1.43	1.43	1.44	1.44	1.44
92	1.36	1.36	1.37	1.37	1.37	1.38
91	1.30	1.30	1.31	1.31	1.31	1.31
90	1.25	1.25	1.25	1.25	1.26	1.26
89	1.20	1.20	1.20	1.20	1.20	1.20
88	1.15	1.15	1.15	1.15	1.15	1.15
87	1.11	1.11	1.11	1.11	1.11	1.11
86	1.06	1.06	1.06	1.06	1.06	1.06
85	1.02	1.02	1.02	1.02	1.02	1.02
84	0.98	0.98	0.98	0.98	0.98	0.98
83	0.94	0.94	0.94	0.94	0.94	0.94
82	0.91	0.90	0.90	0.90	0.90	0.90
81	0.87	0.87	0.87	0.87	0.87	0.87
80	0.83	0.83	0.83	0.83	0.83	0.83
79	0.80	0.80	0.80	0.80	0.80	0.79
78	0.77	0.76	0.76	0.76	0.76	0.76
77	0.73	0.73	0.73	0.73	0.73	0.73
76	0.70	0.70	0.70	0.70	0.70	0.70
75	0.67	0.67	0.67	0.67	0.67	0.66
74	0.64	0.64	0.64	0.64	0.64	0.63
73	0.61	0.61	0.61	0.61	0.61	0.60
72	0.58	0.58	0.58	0.58	0.58	0.57
71	0.55	0.55	0.55	0.55	0.55	0.54
70	0.52	0.52	0.52	0.52	0.52	0.52
69	0.49	0.49	0.49	0.49	0.49	0.49
68	0.47	0.46	0.46	0.46	0.46	0.46
67	0.44	0.44	0.43	0.43	0.43	0.43
66	0.41	0.41	0.41	0.41	0.41	0.40
65	0.38	0.38	0.38	0.38	0.38	0.38
64	0.36	0.35	0.35	0.35	0.35	0.35
63	0.33	0.33	0.33	0.33	0.33	0.32
62	0.30	0.30	0.30	0.30	0.30	0.30
61	0.28	0.28	0.28	0.28	0.28	0.28
60	0.25	0.25	0.25	0.25	0.25	0.25
59	0.23	0.23	0.23	0.23	0.23	0.23
58	0.20	0.20	0.20	0.20	0.20	0.20
57	0.18	0.18	0.18	0.18	0.18	0.18
56	0.15	0.15	0.15	0.15	0.15	0.15
55	0.13	0.13	0.13	0.13	0.13	0.13
54	0.10	0.10	0.10	0.10	0.10	0.10
53	0.08	0.08	0.08	0.08	0.08	0.08
52	0.05	0.05	0.05	0.05	0.05	0.05
51	0.03	0.03	0.03	0.03	0.03	0.03
50	0.00	0.00	0.00	0.00	0.00	0.00

Note: If the value of Q_U or Q_L does not correspond to a value in the table, use the next lower Q value.
 If Q_U or Q_L are negative values, P_U or P_L is equal to 100 minus the table value for P_U or P_L.

Table 106-2 Pay Factors

PAY FACTOR		Minimum Required Percent of Work Within Specification Limits for a Given Pay Factor ($P_U + P_L$) – 100															
Category	I	II	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10 to n=11	n=12 to n=14	n=15 to n=17	n=18 to n=22	n=23 to n=29	n=30 to n=42	n=43 to n=66	n=67 to ∞
			1.05							100	100	100	100	100	100	100	100
1.04						100	100	100	100	100	100	100	100	100	100	100	100
1.03					100	100	100	100	100	100	100	100	100	100	100	100	100
1.02					99	99	99	99	99	99	99	99	99	99	99	99	99
1.01			100	100	100	98	95	92	89	87	88	89	90	91	92	92	93
1.00			69	75	78	80	82	83	84	85	86	87	88	89	90	91	92
0.99			66	72	76	78	80	81	82	83	84	85	86	87	88	89	91
0.98			64	70	74	76	78	79	80	81	82	84	85	86	87	88	90
0.97			63	68	72	74	76	77	78	79	81	82	83	84	86	87	88
0.96			61	67	70	72	74	75	76	78	79	81	82	83	84	86	87
0.95	1.00		59	65	68	71	72	74	75	76	78	79	80	82	83	84	86
0.94	0.99		58	63	67	69	71	72	73	75	76	78	79	80	82	83	85
0.93	0.98		57	62	65	67	69	71	72	73	75	76	78	79	80	82	84
0.92	0.97		55	60	63	66	68	69	70	72	73	75	76	78	79	81	82
0.91	0.96		54	59	62	64	66	68	69	70	72	74	75	76	78	79	81
0.90	0.95		53	57	61	63	65	66	67	69	71	72	74	75	77	78	80
0.89	0.94		51	56	59	62	63	65	66	68	69	71	72	74	75	77	79
0.88	0.93		50	55	58	60	62	64	65	66	68	70	71	73	74	76	78
0.87	0.92		49	53	57	59	61	62	63	65	67	68	70	71	73	75	77
0.86	0.91		48	52	55	58	59	61	62	64	66	67	69	70	72	74	76

Note: If the value of $(P_U + P_L) - 100$ does not correspond to a $(P_U + P_L) - 100$ value in this table, use the next smaller $(P_U + P_L) - 100$ value.

(continued)

Table 106-2 Pay Factors (continued)

PAY FACTOR		Minimum Required Percent of Work Within Specification Limits for a Given Pay Factor ($P_U + P_L$) - 100														
		n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10 to n=11	n=12 to n=14	n=15 to n=17	n=18 to n=22	n=23 to n=29	n=30 to n=42	n=43 to n=66	n=67 to ∞
Category	I															
	II															
	0.85	46	51	54	56	58	60	61	62	64	66	67	69	71	72	75
	0.84	45	49	53	55	57	58	60	61	63	65	66	68	70	71	73
	0.83	44	48	51	54	56	57	58	60	62	64	65	67	69	70	72
	0.82	43	47	50	53	54	56	57	59	61	62	64	66	67	69	71
	0.81	41	46	49	51	53	55	56	58	59	61	63	64	66	68	70
	0.80	40	44	48	50	52	54	55	56	58	60	62	63	65	67	69
	0.79	39	43	46	49	51	52	54	55	57	59	61	62	64	66	68
	0.78	38	42	45	48	50	51	52	54	56	58	59	61	63	65	67
	0.77	36	41	44	46	48	50	51	53	55	57	58	60	62	64	66
	0.76	35	39	43	45	47	49	50	52	54	56	57	59	61	63	65
	0.75	33	38	42	44	46	48	49	51	53	54	56	58	60	62	64
REJECT	0.79	32	37	40	43	45	47	48	49	52	53	55	57	59	60	63
	0.78	30	36	39	42	44	45	47	48	50	52	54	56	57	59	62
	0.77	28	34	38	41	43	44	46	47	49	51	53	55	56	58	61
	0.76	27	33	37	39	42	43	45	46	48	50	52	53	55	57	60
	0.75	25	32	36	38	40	42	43	45	47	49	51	52	54	56	59

Values Less Than Those Shown Above

Note: If the value of $(P_U + P_L) - 100$ does not correspond to a $(P_U + P_L) - 100$ value in this table, use the next smaller $(P_U + P_L) - 100$ value.

(b) When any Category II quality characteristic is less than 1.00, the lot payment is based on the lowest single pay factor for any Category I or II quality characteristic.

(4) When all quality characteristics for a lot are Category II, the lot pay factor is based on the lowest single pay factor for any Category II quality characteristic. The maximum obtainable pay factor is 1.00.

(5) Adjusted payment for material in a lot will be made at a price determined by multiplying the contract unit bid price by the lot pay factor as determined above, or as described in the Payment Subsection of the Section ordering the work.

106.06 Inspection at the Plant. Work may be inspected at the point of production or fabrication. Manufacturing plants may be inspected for compliance with specified manufacturing methods. Material samples may be obtained for laboratory testing for compliance with quality requirements. Allow full entry at all times to the parts of the plant producing the work.

106.07 Partial and Final Acceptance. Maintain the work during construction and until the project is accepted. Damage caused by the Contractor prior to final acceptance of the entire project will be repaired at the Contractor's expense. See FAR Clause 52.236-11 Use and Possession Prior to Completion.

(a) Partial Acceptance. When the Base Schedule, an Option, or any road within an option is completed, a final inspection of that portion of the project may be requested. If the portion is complete and in compliance with the contract, it will be accepted, and the Contractor will be relieved of further responsibility for maintenance of the completed portion. Partial acceptance does not void or alter any of the terms of the contract.

(b) Final acceptance. When notified that the entire project is complete, an inspection will be scheduled. If all work is determined to be complete, the inspection will constitute the final inspection and the Contractor will be notified in writing of final acceptance as of the date of the final inspection. Final acceptance relieves the Contractor of further responsibility for the maintenance of the project.

If the inspection discloses any unsatisfactory work, the CO will provide to the Contractor a list of the work that is incomplete or requires correction. Immediately complete or correct the work. Furnish notification when the work has been completed as provided above.

Section 107.— LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

107.01 Laws to be Observed. Follow the requirements of FAR Clause 52.236-7 Permits and Responsibilities.

Comply with all applicable laws, ordinances, safety codes, regulations, orders, and decrees. Protect and indemnify the Government and its representatives against any claim or liability arising from or based on the alleged violation of the same.

Furnish copies of all acquired permits and agreements not in the contract.

Comply with the terms and conditions included in the Storm Water Pollution Prevention Plan (See Section I).

107.02 Protection and Restoration of Property and Landscape. Follow the requirements of FAR Clause 52.236-9 Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements.

Preserve public and private property, and protect monuments established for the purpose of perpetuating horizontal, vertical, cadastral, or boundary control. When necessary to destroy a monument, reestablish the monument according to applicable state statute or by the direction of the agency or individual who established the monument.

Do not disturb the area beyond the construction limits.

Do not excavate, remove, damage, alter, or deface any archeological or paleontological remains, specimens, delineated heritage resources, or delineated sites. Control the actions of employees and subcontractors on the project to ensure that protected sites are not disturbed or damaged. Should any of these items be encountered, suspend operations at the discovery site, notify the CO, and continue operations in other areas. The CO will inform the Contractor when operations may resume at the discovery site.

When utilities are to be relocated or adjusted, the Government will notify all utility owners affected by the relocations or adjustments. The relocations or adjustments will be performed by others or will be included in the contract work.

Before beginning work in an area, the Contractor shall have all utility owners locate their utilities. Protect utilities from construction operations. Cooperate with utility owners to expedite the relocation or adjustment of their utilities to minimize interruption of service and duplication of work.

If utility services are interrupted as a result of damage by the construction, immediately notify the utility owner, the CO, and other proper authorities. Cooperate with them until service is restored.

Do not work around fire hydrants until provisions for continued service are made and approved by the local fire authority.

Contract Requirements

Project: MT OMAD 18(41), Minuteman Missile Base Roads

If utility adjustment work, not included in the contract, is required, compensation for the work will be provided under applicable clauses of the contract. Satisfactorily repair damage due to the fault or negligence of the Contractor at no cost to the Government.

Repair of damage to underground utilities that were not shown on the plans or identified before construction, and not caused by the fault or negligence of the Contractor, will be paid for by the Government.

Do not damage underground telephone lines, which may be within construction limits. Make arrangements with local telephone companies to locate lines 48 hours before construction.

107.03 Bulletin Board. Furnish a weatherproof bulletin board of suitable size and construction for continuous display of posters and other information required by the contract. Erect and maintain the bulletin board at a conspicuously accessible location on the project and remove and dispose of it after project final acceptance.

Display each of the following documents on the bulletin board:

- (a) "Equal Opportunity" poster, according to FAR Clause 52.222-26 Equal Opportunity;
- (b) "Notice" that the project is subject to Title 18, U.S. Criminal Code, Section 1020, FHWA Form 1022;
- (c) "Notice to Employees" poster, WH-1321, regarding proper pay;
- (d) "Right to Safe and Healthful Workplace" poster, according to Title 29, Code of Federal Regulations, Part 1903;
- (e) "General Wage Decision" contained in the contract; and
- (f) Company equal employment opportunity policy.
- (g) The "Beck" poster, according to FAR Clause 52.222-39 Notification of Employee Rights Concerning Payment of Union Dues or Fees.

107.04 Reserved.

107.05 Responsibility for Damage Claims. Indemnify and hold harmless the Government, its employees, and its consultants from suits; actions; or claims brought for injuries or damage received or sustained by any person, persons, or property resulting from the construction operations or arising out of the negligent performance of the contract.

Procure and maintain until final acceptance of the contract, liability insurance of the types and limits specified below. Obtain insurance from companies authorized to do business in the appropriate state. The insurance shall cover all operations under the contract whether performed by the Contractor or by subcontractors.

Before work begins, furnish “*certificates of insurance*” certifying that the policies will not be changed or canceled until 30 days written notice has been given to the Government. Insurance coverage in the minimum amounts set forth below shall not relieve the Contractor of liability in excess of the coverage.

Carry insurance meeting the following minimums:

(a) Worker’s compensation insurance. Minimum required by law.

(b) Comprehensive or commercial general liability insurance.

(1) Personal injury and property damage coverage;

(2) Contractual liability coverage;

(3) Completed operations liability coverage;

(4) \$1,000,000 combined single limit for each occurrence; and

(5) \$2,000,000 general aggregate limit.

(c) **Automobile liability insurance.** \$1,000,000 combined single limit for each occurrence.

107.06 Contractor’s Responsibility for Work. Assume responsibility for all work until final acceptance except as provided in Subsection 106.07. This includes periods of suspended work. Protect the work against injury, loss, or damage from all causes whether arising from the execution or nonexecution of the work.

Maintain public traffic according to Section 156. Rebuild, repair, restore, and make good all losses, injuries, or damages to any portion of the work. This includes losses, injuries, or damages caused by vandalism, theft, accommodation of public traffic, and weather that occurs during the contract.

The Government will only be responsible for losses, injuries, and damages to work put in place that was caused by declared enemies and terrorists of the Government and cataclysmic natural phenomenon such as tornadoes, earthquakes, major floods, and other officially declared natural disasters. The Government will only be responsible for costs attributable to repairing or replacing damaged work. The Government will not be responsible for delay costs, impact costs, or extended overhead costs.

107.07 Furnishing Right-of-Way. The Government will obtain all right-of-way.

107.08 Sanitation, Health, and Safety. Follow the requirements of FAR Clause 52.236-13 Accident Prevention.

Submit an accident prevention plan for implementing safety and health standards at the Preconstruction Conference. Use the Government furnished Form WFLHD-28, *Guide Outline of Contractor's Accident Prevention Plan*.

Observe rules and regulations of Federal, State, and local health officials. Do not permit any worker to work in surroundings or under conditions that are unsanitary, hazardous, or dangerous.

Admit any OSHA inspector or other legally responsible official involved in safety and health administration to the project work site upon presentation of proper credentials.

Report accidents on forms furnished by the Government or, with prior approval, on forms used to report accidents to other agencies or insurance carriers. Maintain a "*Log of Work Related Injuries and Illnesses*," OSHA Form 300, and make it available for inspection.

Install a reverse signal alarm audible above the surrounding noise level on all motorized vehicles having an obstructed view and on all earth-moving and compaction equipment.

107.09 Legal Relationship of the Parties. In the performance of the contract, the Contractor is an independent contractor and neither the Contractor nor anyone used or employed by the Contractor shall be an agent, employee, servant, or representative of the Government. The Contractor's independent contractor status does not limit the Government's general rights under the contract.

107.10 Environmental Protection.

Conform to the following:

(a) The Federal Water Pollution Control Act (33 USC § 1251 et seq.).

(1) Except as authorized by this contract, do not operate mechanized equipment, discharge or place material within the boundaries of any U.S. waters as identified by the ordinary high water mark, high tide line, or edge of the wetland. This includes wetlands, unless authorized by a permit issued by the U.S. Army Corps of Engineers according to 33 USC § 1344, and if required by the state agency having jurisdiction over the discharge of material into the waters of the U.S. In the event of an unauthorized discharge:

- (a) immediately prevent further contamination;
- (b) immediately notify appropriate authorities and the CO; and
- (c) mitigate damages as required.

(2) Separate work areas, including material sources by the use of a suitable barrier that prevents sediment, petroleum products, chemicals, other liquids, or solid materials from entering the waters of the U.S. Construct and remove barriers to avoid discharge of material into the waters of the U.S. Remove and properly dispose of sediment or other material collected by the barrier.

(b) Construction Activities Outside Construction Limits. Before beginning construction activities outside the construction limits (such as material sources, disposal sites, waste areas, access roads, water sources, stockpiles and staging areas) that will require ground disturbance, occupation, clearing, or other environmental impacts provide the following documents.

The requirements below do not apply to commercial sources that are established, have provided material to public and private entities on a regular basis over the last two years, have appropriate State and local permits, and do not require expansion outside their currently established and permitted area.

(1) Proposed Activity Description. Submit a description, schedule, and location of the proposed activities for approval of the CO. Include maps of the area and other relevant information.

(2) Cultural Resources. Submit written documentation satisfactory to the CO for a finding of either “no historic properties affected” or “no effect” according to 36 CFR 800.4(d)(1) for historic properties on or eligible for listing to the National Register of Historic Places. Provide either:

(a) Documentation showing there are no cultural resources present, and a finding of either “no historic properties affected” or “no effect” according to 36 CFR 800.4(d)(1). Documents must be prepared by an individual qualified under the Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation, 48 FR 44716-44740.

Documentation must be satisfactory to the State Historic Preservations Officer (SHPO) or Tribal Historic Preservations Officer (THPO) as appropriate, according to 36 CFR 800.3(c).

The CO will forward the documentation to the SHPO or THPO. Anticipate a minimum of 30 days from receipt of the documentation by the SHPO or THPO before use of the site may be approved; or

(b) Documentation showing a finding of either “no historic properties affected” or “no effect” according to 36 CFR 800.4(d)(1) has been previously obtained for the proposed activities from the State, Tribal Government or Federal Land Management Agency responsible for the land. Include attached copies of SHPO concurrence, or Memorandum of Agreement (MOA) where concurrence is not required.

(3) Species Protected Under the Endangered Species Act of 1973. Submit written documentation satisfactory to the CO that the proposed action will have no effect to any threatened or endangered species or their critical habitat. Provide either:

(a) A current list of all threatened or endangered species in the site of proposed activities from the U.S. Fish and Wildlife Service; and a recommendation of a “no effect” determination according to Section 7 of the Endangered Species Act prepared by a biological specialist with a minimum of 3 years of experience in Endangered Species Act compliance or other qualifications acceptable to the CO. Allow up to 30 days to obtain the current list of all threatened or endangered species from the U.S. Fish and Wildlife Service; or

(b) Documentation showing the proposed activities have previously been determined to comply with the Endangered Species Act and this determination remains valid. This documentation must be from the State, Tribal Government or Federal Land Management Agency responsible for the land. Attach evidence of compliance, including correspondence with the U.S. Fish and Wildlife Service.

(4) Wetlands as Defined by the U.S. Army Corps of Engineers' 1987 Wetland Delineation Manual (WDM). Submit written documentation satisfactory to the CO, that the proposed action will comply with Section 404 of the Clean Water Act, Executive Order 11990, and will not affect any wetlands. Documentation must be prepared by a wetland specialist with a minimum of 3 years of experience in wetland delineation using WDM or other qualifications acceptable to the CO.

(5) Federal Lands. Before use of sites on federal lands, submit a copy of the Letter of Approval or Special Use Permit from the applicable federal agency allowing use of the site for intended purposes.

(6) Tribal, State and Local Approvals. Comply with applicable laws regarding the proposed activities. Submit copies of required clearances, including hazardous waste compliance, tribal, State and local permits and approvals.

At the discretion of the CO, the Montana Opencut Mining Permit from the Montana Department of Environmental Quality may be accepted in lieu of the requirements in paragraph **(b)(1)-(4)**. Allow 12 days (in addition to other agency time requirements) for approval of documents

(c) Oil and Hazardous Substances. Submit a Hazardous Spill Plan at least 2 days before beginning work describing what actions will be taken in case of a spill, and incorporate preventative measures to be implemented (such as the placement of refueling facilities, storage and handling of hazardous materials, etc).

At present, a Spill Prevention, Control, and Countermeasure (SPCC) plan will be required for sites in operation after July 1, 2009 that store petroleum and synthetic oil products with a maximum above-ground combined capacity greater than 1,320 gallons. This includes both bulk and operational storage containers (such as tanks on trucks and construction equipment) with a capacity greater than 55 gallons that are used to transfer or store oil for further distribution. It does not include tanks used primarily to power the movement of the motor vehicle. Develop a SPCC plan for sites that meet the requirements of 40 CFR Part 112. Owners and operators must comply by July 1, 2009. Submit the SPCC plan [INSERT by June 28, 2009 OR at least 2 days before beginning work for projects beginning after July 1, 2009].

Do not use equipment that is leaking fluids. Repair leaks on equipment immediately. Keep a supply of absorbent materials at the job site in the event of spills. Acceptable absorbent materials are those manufactured specifically for the containment and clean up of hazardous materials.

(d) Other Requirements. Comply with the following requirements:

- (1) Obtain clearances for material sources from the Montana Department of Environmental Quality.
- (2) Obtain clearances for water sources according to Subsection 158.03.
- (3) Thoroughly wash vehicles and equipment to remove weed seeds prior to moving onto the project (including material sources) and when moving from one site to another.
- (4) Comply with the terms and conditions of any permits that are issued for the performance of work within the wetted perimeter of waters of the U.S.
- (5) Apply road stabilization treatments according to manufacturer's instructions. Do not discharge road stabilization treatments into any waters of the U.S. Obtain the Material Safety Data Sheet for the product, and maintain this information in an accessible location at the project site.
- (6) Do not alter, remove, place equipment upon, or otherwise damage the old fence posts located at:
 - (a) Route O-11 MP 0.8 near the existing cattle guard.
 - (b) Route O-11 MP 1.1 near the approach road on the left side.
 - (c) Route E-9 at MP 0.0.
- (7) Do not alter, remove, place equipment upon, or otherwise damage the environmentally sensitive areas at: L-05 MP 1.7 left side of road to L-05 MP 2.1 approach right in ditch by fence.
- (8) Do not alter, remove, place equipment in or upon, or otherwise damage the Farmstead with historic structures at: L-05 MP 4.1 on left.
- (9) Photograph the bridge on Route O-11 prior to construction. Take photos from each approach, on each side of the bridge as well as straight on. Photograph details of the structure – existing condition of decking, guardrails, and other details. Provide a CD or prints of the photos to the CO at least 3 days prior to redecking.

107.11 Protection of Forests, Parks, and Public Lands. Comply with all regulations of the State fire marshal, conservation commission, U.S. Forest Service, National Park Service, Bureau of Land Management, U.S. Fish & Wildlife Service, Bureau of Indian Affairs, or other authority having jurisdiction governing the protection of land including or adjacent to the project.

Section 108.— PROSECUTION AND PROGRESS

108.01 Commencement, Prosecution, and Completion of Work. Follow the requirements of FAR Clause 52.211-10 Commencement, Prosecution, and Completion of Work.

(a) Do not perform any ground disturbing work until a material source acceptable to the Government has been identified and all necessary permits and clearances have been obtained.

(b) If the Government exercises Option A, Option B, Option C, or any combination of schedules, adjust the fixed completion date as follows:

(1) If Option A is exercised, add 39 days to the current fixed completion date.

(2) If Option B is exercised, add 51 days to the current fixed completion date.

(3) If Option C is exercised, add 9 days to the current fixed completion date.

(c) A preconstruction conference will be held after the contract is awarded and before beginning work. Seven days before the preconstruction conference, furnish three copies of the preliminary construction schedule according to Section 155.

(d) Provide notification as follows:

(1) Furnish at least 48 hours advance notice before changing the current work schedule.

(2) Furnish notification at least 14 days in advance of any change to the current work shift schedule.

(3) Furnish notification at least 24 hours in advance of resuming work after a suspension.

(4) Furnish notification at least 48 hours in advance to beginning the start-up phase in Section 153.

(e) Perform work under this contract according to the following:

(1) Do not perform work, except as indicated in (a) through (d) below, from November 1 of any year through March 31 of the succeeding year, both dates inclusive. The following work is allowed during the winter shutdown:

(a) Mobilization to and from the project.

(b) Survey and staking.

(c) Production of materials at contractor located sources.

(d) Installation of temporary traffic control.

- (2) Do not perform construction operation between 6 p.m. Friday and 6 a.m. the following Tuesday of the Memorial Day and Labor Day weekends.
- (3) Do not perform construction operations between 6 p.m. the day before and 6 a.m. the following Tuesday after the Fourth of July holiday.
- (4) Limit work which disturbs the surface of the traveled way as provided for in Subsection 156.06.
- (5) Limit the number of roads under construction at any one time as provided for in Subsection 156.06.
- (6) Coordinate haul routes as provided for in Subsection 105.03(b).

108.01A Labor. Follow the requirements of FAR Clause 52.222-6 Davis Bacon Act.

Adjacent or virtually adjacent work sites are defined to be work sites within ½ mile of the project. Application of the Davis-Bacon Act for work sites beyond ½ mile of the project will be determined by the CO.

108.02 Subcontracting. FAR clauses 52.219-4, Notice of Price Evaluation Preference for HUBZone Small Business Concerns, 52.222-11 Subcontracts (Labor Standards), and 52.236-1, Performance of Work by the Contractor are supplemented as follows.

Subcontracting does not relieve the Contractor of liability and responsibility under the contract and does not create any contractual relation between subcontractors and the Government. The Contractor is liable and responsible for any action or lack of action of subcontractors.

Within 14 days of subcontract award, submit an SF 1413 with Part I completed. Complete other forms that may be provided by the Government to clearly show the work subcontracted and the total dollar amount of the subcontract. For subcontracts involving on-site labor, require the subcontractor to complete Part II of the SF 1413 and complete other forms that may be provided by the Government. Submit a separate statement documenting the cumulative amount of all on-site subcontracts to date as a percentage of the original contract amount. Furnish this information on all subcontracts at lower tiers.

In FAR Clauses 51.219-8, Utilization of Small Business Concerns and 52.232-27, Prompt Payment for Construction Contracts, the subcontracts include both on-site work and supply contracts.

Evaluate the percentage of the cost of contract performance incurred for personnel in FAR Clause 52.219-4, Notice of Price Evaluation Preference for HUBZone Small Business Concerns, according to the following formula:

$$P = H / T$$

Where:

P = Percent of the cost of contract performance incurred for personnel working for HUBZone firms

T = Total wages/benefits paid during the life of the contract. Certified payrolls will be used to determine Davis-Bacon wages and benefits paid. Submit certified statements at least monthly declaring the wages and benefits paid to non-Davis-Bacon personnel under this contract.

H = Total wages/benefits paid to employees working for HUBZone firms (prime and subcontractors)

In FAR Clause 52.236-1, Performance of Work by the Contractor, the percentage of work performed on-site by the Contractor will be computed as 100% less the combined initial dollar amount of all subcontracts involving on-site labor as a percent of the original dollar amount of the contract.

108.02A Prime HUBZone Contractors and subcontracting. (Added Subsection.)

Follow the requirements of §126.700 of Title 13 of the Code of Federal Regulations (13 CFR 126.700). In addition to the requirements in paragraph (d)(3) of FAR Clause 52.219-4 Notice of Price Evaluation Preference for HUBZone Small Business Concerns (SBCs), comply with the following:

- At least 50 percent of the cost of the contract performance incurred for personnel will be spent on the Prime HUBZone contractor's employees or the employees of other qualified HUBZone small business concerns.
- The above requirement may be met by expending at least 50% of the cost of the contract incurred for personnel on the Prime HUBZone contractor's employees or it may subcontract up to 35% of the cost of the contract performance incurred for personnel to one or more qualified HUBZone SBCs.
- A qualified Prime HUBZone SBC may not subcontract more than 50% of the cost of the contract incurred for personnel to non-qualified HUBZone SBCs.

108.03 Determination and Extension of Contract Time. Follow the requirements of FAR Clause 52.211-10 Commencement, Prosecution, and Completion of Work.

Only delays or modifications that affect critical activities or cause noncritical activities to become critical will be considered for time extensions.

Contract Requirements

Project: MT OMAD 18(41), Minuteman Missile Base Roads

When Critical Path Method schedules are used, no time extension will be made for delays or modifications that use available float time as shown in the current construction schedule required by Section 155.

Time will not be extended for a claim that states insufficient time was provided in the contract.

When requesting a time extension, follow the applicable contract clauses. Make the request in writing and include the following:

- (a) Contract clause(s) under which the request is being made.
- (b) Detailed narrative description of the reasons for the requested contract time adjustment including the following:
 - (1) Cause of the impact affecting time;
 - (2) Start date of the impact;
 - (3) Duration of the impact;
 - (4) Activities affected; and
 - (5) Methods to be employed to mitigate the impact.
- (c) Suggested new completion date or number of days supported by current and revised construction schedules according to Section 155.

108.04 Failure to Complete Work on Time. Follow the requirements of FAR Clause 52.211-12 Liquidated Damages — Construction.

Liquidated damages will be assessed at \$1000.00 for each calendar day beyond the time specified in the contract until substantial completion of the work.

If the Government exercises any options, assessment of liquidated damages will be based on the completion date as provided for in Subsection 108.01.

Liquidated damages will not be assessed for the following:

- (a) The day of the final inspection.
- (b) Days required to perform work added to the contract after substantial completion including items identified during the final inspection that were not required before that time.
- (c) Delays by the Government after all work is complete and before a formal acceptance is executed.
- (d) Periods of time when all work is complete but acceptance is delayed pending the plant establishment period or similar warranty period.
- (e) During winter shutdown periods ordered by the CO.

Contract Requirements

Project: MT OMAD 18(41), Minuteman Missile Base Roads

108.05 Stop Order. The CO may order the performance of the work to be stopped, either in whole or in part, for such periods deemed necessary due to the following:

- (a) Weather or soil conditions considered unsuitable for prosecution of the work; or
- (b) Failure of the Contractor to:
 - (1) Correct conditions unsafe for the workers or the general public;
 - (2) Carry out written orders given by the CO; or
 - (3) Perform any provision of the contract.

No adjustment in contract time or amount will be made for stop orders issued under **(a)** or **(b)** above except an adjustment in contract time, as provided by FAR Clause 52.249-10 Default (Fixed-Price Construction), may be made when the Contractor is able to demonstrate that the weather was unusually severe based on the most recent 10 years of historical data.

Section 109.— MEASUREMENT AND PAYMENT

109.01 Measurement of Work. Take and record measurements and perform calculations to determine pay quantities for invoicing for work performed. Take or convert all measurements of work according to United States customary measure.

Unless otherwise specified, measure when the work is in place, complete, and accepted. Measure the actual work performed, except do not measure work outside the design limits or other adjusted or specified limits (staked limits). Measure structures to the lines shown on the plans or to approved lines adjusted to fit field conditions.

Take measurements as described in Subsection 109.02 unless otherwise modified by the Measurement Subsection of the Section controlling the work being performed.

Remeasure quantities if it has been determined that any portion of the work is acceptable but has not been completed to the lines, grades, and dimensions shown on the plans or established by the CO.

Submit measurement notes to the CO within 24 hours of completing the work. For on-going work, submit measurement notes weekly. When work is not complete, identify the measurement as being an interim measurement. Submit the final measurement when the installation is completed. Measurement notes form the basis of the Government's receiving report (see Subsection 109.08(d)). For lump sum items, submit documentation to support invoiced progress payment on a monthly basis.

Use an acceptable format for measurement records. As a minimum, include the following information in all records of measurement:

- (a) Project name and number;
- (b) Contract item number;
- (c) Date the work was performed;
- (d) Location of the work;
- (e) Measured quantity;
- (f) Calculations made to arrive at the quantity;
- (g) Supporting sketch and details as needed to clearly define the work performed and the quantity measured;

- (h) Names of persons measuring the work;
- (i) Identification as to whether the measurement is interim or final; and
- (j) Signed certification statement by the persons taking the measurements, performing the calculations, and submitting them for payment that the measurement and calculations are correct to the best of their knowledge and that the quantity being measured is subject to direct payment for the identified item under the contract.

109.02 Measurement Terms and Definitions. Unless otherwise specified, the following terms are defined as follows:

(a) Contract quantity. The quantity to be paid is the quantity shown in the bid schedule. The contract quantity will be adjusted for authorized changes that affect the quantity or for errors made in computing this quantity. If there is evidence that a quantity specified as a contract quantity is incorrect, submit calculations, drawings, or other evidence indicating why the quantity is in error and request, in writing, that the quantity be adjusted.

(b) Cubic yard in the hauling vehicle. Measure the cubic yard volume in the hauling vehicle using three-dimensional measurements at the point of delivery. Use vehicles bearing a legible identification mark with the body shaped so the actual contents may be readily and accurately determined. Before use, mutually agree in writing on the volume of material to be hauled by each vehicle. Vehicles carrying less than the agreed volume may be rejected or accepted at the reduced volume.

Level selected loads. If leveling reveals the vehicle was hauling less than the approved volume, reduce the quantity of all material received since the last leveled load by the same ratio as the current leveled load volume is to the agreed volume. Payment will not be made for material in excess of the agreed volume.

Material measured in the hauling vehicle may be weighed and converted to cubic yards for payment purposes if the conversion factors are mutually agreed to in writing.

(c) Each. One entire unit. The quantity is the actual number of units completed and accepted.

(d) Fixed hourly rate. Measure the actual number of hours ordered by the CO and performed by the Contractor.

(e) Linear foot. As applicable, measure the work along its length from end-to-end; parallel to the base or foundation; along the top; along the front face; or along the invert. Do not measure overlaps.

(f) Lump sum. Do not measure directly. The bid amount is complete payment for all work described in the contract and necessary to complete the work for that item. The quantity is designated as "All." Estimated quantities of lump sum work shown in the contract are approximate.

(g) M-gallon. 1,000 gallons. Measured by any of the following methods:

Contract Requirements

Project: MT OMAD 18(41), Minuteman Missile Base Roads

Measured volume container

Metered volume. Use an approved metering system.

Commercially-packaged volume.

(h) Mile. 5,280 linear feet. Measure horizontally along the centerline of each roadway, approach road, or ramp.

(i) Square foot. Measure on a plane parallel to the surface being measured.

(j) Square yard. 9 square feet. Longitudinal and transverse measurements for area computations will be made horizontally. No deductions from the area computation will be made for individual fixtures having area of 9 square feet or less. Do not measure overlaps.

(k) Station. 100 linear feet. Measure horizontally along centerline or reference line of each roadway, approach road, or ramp.

(l) Ton. 2,000 pounds avoirdupois. Measure according to Subsection 109.03.

No adjustment in a contract unit price will be made for variations in quantity due to differences in the specific gravity or moisture content.

Use net-certified scale masses, or masses based on certified volumes in the case of rail shipments as a basis of measurement subject to correction when asphalt material is lost from the car or the distributor, wasted, or otherwise not incorporated in the work. When asphalt material is shipped by truck or transport, net-certified masses, subject to correction for loss or foaming, may be used for computing quantities.

When emulsified asphalt is converted from volume to mass, use a factor of 240 gallons per ton regardless of temperature.

When asphalt binder for asphalt concrete pavement is stored in tanks devoted exclusively to the project, base quantities on invoices. When asphalt binder for asphalt concrete pavement is not stored in tanks devoted exclusively to the project, or when the validity of the quantity requested for payment is in question, base quantities on the asphalt content determined by testing.

109.03 Weighing Procedures and Devices. Batch masses may be acceptable for determination of pay quantities when an approved automatic weighing, cycling, and monitoring system is included as part of the batching equipment.

When a weighing device is determined to indicate less than true mass, no additional payment will be made for material previously weighed and recorded. When a weighing device is determined to indicate more than true mass, all material received after the last previously correct weighing accuracy test will be reduced by the percentage of error in excess of 0.5 percent.

When material is proportioned or measured and paid for by mass, provide one of the following:

(a) Commercial weighing system. Use permanently-installed and certified commercial scales.

(b) Invoices. If bulk material is shipped by truck or rail and is not passed through a mixing plant, furnish a supplier's invoice with net mass or volume converted to mass. Periodic check weighing may be required.

(c) Project weighing system. Furnish, erect, and maintain acceptable automatic digital scales. For small quantities, manual scales may be used when approved in writing by the CO and if the method of weighing meets all other contract requirements. Provide scales that record mass at least to the nearest 100 pounds. Maintain the scale accuracy to within 0.5% of the correct mass throughout the range of use.

Do not use spring balances.

Install and maintain platform scales with the platform level with rigid bulkheads at each end. Make the platform of sufficient length to permit simultaneous weighing of all axle loads of the hauling vehicle. Coupled vehicles may be weighed separately or together according to Section 2.20 paragraph UR 3.3 of *NIST Handbook 44*.

Install and maintain belt-conveyor scales according to Section 2.21 of *NIST Handbook 44*.

Before production on the project, after relocation, and at least once per year, have the weighing portion of the system checked and certified by the State Bureau of Weights and Measures or a private scale service certified by the Bureau of Weights and Measures. Seal the system to prevent tampering or other adjustment after certification.

Attach an automatic printer to the scale that is programmed or otherwise equipped to prevent manual override of all mass information. For weighed pay quantities, program the printer to provide the following information for each weighing:

- (1) Project number;
- (2) Item number and description;
- (3) Date;
- (4) Time;
- (5) Ticket number;
- (6) Haul unit number;
- (7) Net mass in load at least to the nearest 100 pounds;

(8) Subtotal net mass for each haul unit since the beginning of the shift; and

(9) Accumulated total net mass for all haul units since the beginning of the shift.

If a printer malfunctions or breaks down, the Contractor may manually weigh and record masses for up to 48 hours provided the method of weighing meets all other contract requirements.

Furnish competent scale operators to operate the system.

When platform scales are used, randomly weigh the empty haul units at least twice per shift.

Use an approved format for the mass records. Furnish the original record(s) and a written certification as to the accuracy of the masses at the end of each shift.

109.04 Receiving Procedures. When the method of measurement requires weighing or volume measurement in the hauling vehicle, furnish a person to direct the spreading and distribution of material on the project. During the placement, maintain a record of each delivery and document it in an acceptable manner. Include the following information as applicable:

- (a) Project identification;
- (b) Contract pay item number and description;
- (c) Date;
- (e) Load number;
- (f) Truck identification;
- (g) Time of arrival;
- (h) Mass or volume; and
- (i) Spread person's signature.

Use an approved format for the delivery record(s). Furnish the original record(s) and a written certification of the delivery of the material at the end of each shift.

109.05 Scope of Payment. Payment for all contract work is provided, either directly or indirectly, under the pay items shown in the bid schedule.

(a) Direct payment. Payment is provided directly under a pay item shown in the bid schedule when one of the following applies:

(1) The work is measured in the Measurement Subsection of the Section ordering the work, and the bid schedule contains a pay item for the work from the Section ordering the work.

(2) The Measurement Subsection, of the Section ordering the work, references another Section for measuring the work and the bid schedule contains a pay item for the work from the referenced Section.

(b) Indirect payment. Work for which direct payment is not provided is a subsidiary obligation of the Contractor. Payment for such work is indirectly included under other pay items shown in the bid schedule. This includes instances when the Section ordering the work references another Section for performing the work and the work is not referenced in the Measurement Subsection of the Section ordering the work.

Compensation provided by the pay items included in the contract bid schedule is full payment for performing all contract work in a complete and acceptable manner. All risk, loss, damage, or expense arising out of the nature or prosecution of the work is included in the compensation provided by the contract pay items.

Work measured and paid for under one pay item will not be paid for under any other pay item.

The quantities shown in the bid schedule are approximate unless designated as a contract quantity. Limit pay quantities to the quantities staked, ordered, or otherwise authorized before performing the work. Payment will be made for the actual quantities of work performed and accepted or material furnished according to the contract. No payment will be made for work performed in excess of that staked, ordered, or otherwise authorized.

109.06 Pricing of Adjustments. Determine all costs according to the contract cost principles and procedures of FAR Part 31. Follow the requirements of all FAR clauses providing for an equitable price adjustment.

If agreement on price cannot be reached, the CO may determine the price unilaterally.

If the work will delay contract completion, request a time extension according to Subsection 108.03.

(a) Proposal.

(1) **General.** Submit a written proposal for each line item of the work or a lump sum for the total work. Identify the major elements of the work, the quantity of the element, and its contribution to the proposed price. Provide further breakdowns if requested by the CO.

When price is based on actual costs (e.g., cost-plus-fixed-fee), profit is based on the estimated cost of the work and may not exceed the statutory limit of 10 percent of the total cost. Due to the limited risk in this type of pricing arrangement, a lower profit percentage may be indicated.

(2) Data. Submit information as requested by the CO to the extent necessary to permit the CO to determine the reasonableness of the proposed price.

(3) Cost or pricing data. When the contract modification exceeds the amount indicated in FAR Clause 52.214-27 Price Reduction for Defective Cost or Pricing Data - Modifications - Sealed Bidding, or FAR Clause 52.215-11 Price Reduction for Defective Cost or Pricing Data - Modifications, submit cost or pricing data.

Provide cost or pricing data, broken down by individual work item, for the Contractor and each major subcontractor. Include the information required by **(b)(1)** and **(b)(2)** below. When cost or pricing data is submitted before all or most of the work is performed, submit material and subcontractor quotes, anticipated labor and equipment usage, and anticipated production rates. Provide data for all proposed increases or decreases to the contract price.

Submit with the cost or pricing data a written proposal for pricing the work according to **(1)** above. See Table 15-2 following FAR Subpart 15.4 for guidance.

Upon completion of negotiations, certify the cost or pricing data as being accurate, complete, and current as of the date the agreement was reached.

(b) Postwork pricing. When negotiating the price of additional or changed work after all or most of the work has been performed, furnish the following:

(1) Direct costs.

(a) Material. Furnish invoices showing the cost of material delivered to the work.

(b) Labor. Show basic hourly wage rates, fringe benefits, applicable payroll costs (i.e., FICA, FUTA, worker's compensation, insurance, and tax levies), paid subsistence, and travel costs for each labor classification and foreman employed in the adjusted work.

(c) Equipment. Provide a complete descriptive listing of equipment including make, model, and year of manufacture. Support rented or leased equipment costs with invoices. Determine allowable ownership and operating costs for Contractor- and subcontractor-owned equipment as follows:

(1) Use actual equipment cost data when such data can be acceptably determined from the Contractor's or subcontractor's ownership and operating cost records.

(2) When actual costs cannot be determined, use the rates shown in *Construction Equipment Ownership and Operating Expense Schedules (CEOES)* published by the U.S. Army Corps of Engineers for the area where costs are incurred. This document is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402-9325. Adjust the rates for used equipment and for other variable parameters used in the schedules.

(3) Compute proposed standby costs from acceptable ownership records or when actual costs cannot be determined, according to *CEOES*. Do not exceed 8 hours in any 24-hour period or 40 hours in any calendar week. Do not include standby for periods when the equipment would have otherwise been in an idle status or for equipment that was not in operational condition.

(d) *Other direct costs.* Furnish documentation or invoices to support any other direct costs incurred that are not included above (e.g., bonds, mobilization, demobilization, permits, royalties, etc).

(e) *Production rates.* Provide actual hours of performance, on a daily basis, for each labor classification and for each piece of equipment.

(f) *Subcontract costs.* Provide supporting data as required above.

(2) Overhead. Identify overhead rate(s) and provide supporting data, which justifies the rate(s). List the types of costs, which are included in overhead. Identify the cost pool(s) to which overhead is applied. Apply the overhead to the appropriate pool.

Limit Contractor overhead applied to subcontractor payments to 5 percent of such payments unless a higher percentage is justified.

(3) Profit. Except when precluded by the FAR, include a reasonable profit reflecting the efficiency and economy of the Contractor and subcontractors in performing the work, the contract risk type, the work difficulty, and management effectiveness and diversity.

For work priced after all or most of the work is performed, profit is limited by statute to 10 percent of the total cost. Due to the limited risk in post-work pricing, a lower profit percentage may be indicated.

109.07 Eliminated Work. Follow the requirements of FAR Clause 52.243-4 Changes.

Work may be eliminated from the contract without invalidating the contract. The Contractor is entitled to compensation for all direct costs incurred before the date of elimination of work plus profit and overhead on the direct incurred costs. Anticipated profit and overhead expense on the eliminated work will not be compensated.

109.08 Progress Payments. Follow the requirements of FAR Clauses 52.232-5 Payments under Fixed-Price Construction Contracts and 52.232-27 — Prompt Payment for Construction Contracts.

(a) General. Only invoice payments will be made under this contract. Invoice payments include progress payments made monthly as work is accomplished and the final payment made upon final acceptance. Only one progress payment will be made each month. No progress payment will be made in a month in which the work accomplished results in a net payment of less than \$1,000. Full or partial progress payment will be withheld until a construction schedule or schedule update is submitted to, and accepted by, the CO.

(b) Closing date and invoice submittal date. The closing date for progress payments will be designated by the CO. Include work performed after the closing date in the following month's invoice. For work performed between September and July of any year, submit invoices to the designated billing office by the 7th day after the closing date. Invoices received by the designated billing office after the 16th day following the closing date, for work included in the September through July invoices, will not be accepted for payment processing that month. For work included in the August invoice, submit the invoice to the designated billing office by the 5th day after the closing date. Invoices received by the designated billing office after the 5th day following the closing date, for work included in the August invoice, will not be accepted for payment processing that month. Include late, unprocessed invoice submittals in the following month's invoice.

(c) Invoice requirements. Submit the invoice to the Government's designated billing office. Include the following items in the invoice:

(1) The information required in FAR Clause 52.232-27(a)(2)(i) through (a)(2)(xi).

(2) A tabulation of total quantities and unit prices of work accomplished or completed on each pay item as of the monthly closing date. Do not include any quantities unless field note documentation for those quantities was submitted by the closing date. Do not include quantities of work involving material for which test reports required under Sections 153 or 154 or certifications required by Subsection 106.03 are, or will be, past due as of the closing date.

(3) The certification required by FAR Clause 52.232-5(c) and, if applicable, the notice required by FAR Clause 52.232-5(d). Provide an original signature on the certification. Facsimiles are not acceptable.

(4) If applicable, a copy of the notices that are required by FAR Clause 52.232-27(e)(5) and (g).

(5) The amount included for work performed by each subcontractor under the contract.

(6) The total amount of each subcontract under the contract.

(7) The amounts previously paid to each subcontractor under the contract.

(8) Adjustments to the proposed total payment that relate to the quantity and quality of individual items of work. Adjustments for the following may be made by the Government after validation of the invoice:

(a) Retent resulting from a failure to maintain acceptable progress;

(b) Retent resulting from violations of the labor provisions;

(c) Retent pending completion of incomplete work, other “no pay” work, and verification of final quantities;

(d) Obligations to the Government such as excess testing cost or the cost of corrective work pursuant to FAR Clause 52.246-12(g); or

(e) Liquidated damages for failure to complete work on time.

(d) Government’s receiving report. The Government’s receiving report will be developed using the measurement notes received by the CO and determined acceptable. Within 7 days after the closing date, the CO will be available by appointment at the Government’s designated billing office to advise the Contractor of quantities and unit prices appearing on the Government’s receiving report.

(e) Processing progress payment requests. No payment will be made for work unless field note documentation for the work was provided by the closing date.

(1) Work performed between September and July

(a) *Invoices received by the 7th day following the closing date.*

(1) *Proper invoices.* If the invoice meets the requirements of Subsection 109.08(c), and the quantities and unit prices shown on the contractor’s invoice agree with the corresponding quantities and unit prices shown on the Government’s receiving report, the invoice will be paid.

(2) *Defective invoices.* If the invoice does not meet the requirements of Subsection 109.08(c), or if any of the quantities or unit prices shown on the contractor's invoice exceed the corresponding quantities and unit prices shown on the Government's receiving report, the invoice will be deemed defective and the Contractor so notified according to FAR Clause 52.232-27(a)(2). Defective invoices will not be corrected by the Government and will be returned to the contractor within 7 days after the Government's designated billing office receives the invoice.

Revise and resubmit returned invoices by the 18th day following the closing date. The CO will evaluate the revised invoice. If the invoice still does not meet the requirements of Subsection 109.08(c), the contractor will be so notified according to FAR Clause 52.232-27(a)(2), and no progress payment will be made that month. Correct the deficiencies and resubmit the invoice the following month.

If the revised invoice meets the requirements of Subsection 109.08(c), but still has quantities or unit prices exceeding the corresponding quantities and unit prices shown on the Government's receiving report, the Government's data for that item of work will be used. The contractor's invoice, as revised by the Government's receiving report, will be forwarded for processing by the 23rd day following the closing date. The contractor will be notified by the 23rd day following the closing date of the reasons for any changes to the invoice.

(b) *Invoices received between the 8th and 16th day following the closing date.*

(1) *Proper invoices.* If the invoice meets the requirements of Subsection 109.08(c), and the quantities and unit prices shown on the Contractor's invoice agree with the corresponding quantities and unit prices shown on the CO's receiving report, the invoice will be deemed proper and forwarded for processing within 7 days of receipt.

(2) *Defective invoices.* If the invoice does not meet the requirements of Subsection 109.08(c), the invoice will be deemed defective, the Contractor so notified according to FAR Clause 52.232-27(a)(2), and no progress payment will be made that month. Correct the deficiencies and resubmit the invoice the following month.

If the invoice meets the requirements of Subsection 109.08(c), but has quantities or unit prices exceeding the corresponding quantities and unit prices shown on the Government's receiving report, the Government's data for that item of work will be used. The contractor's invoice, as revised by the Government's receiving report, will be forwarded for processing within 7 days after receiving the invoice. The contractor will be notified, within 7 days of the Government's receipt of the invoice, of the reasons for any changes to the invoice.

(2) Work performed during August.

(a) Proper invoices. If the invoice meets the requirements of Subsection 109.08(c), and the quantities and unit prices shown on the Contractor's invoice agree with the corresponding quantities and unit prices shown on the CO's receiving report, the invoice will be deemed proper and forwarded for processing within 7 days of receipt.

(b) Defective invoices. If the invoice does not meet the requirements of Subsection 109.08(c), the invoice will be deemed defective, the Contractor so notified according to FAR Clause 52.232-27(a)(2), and no progress payment will be made that month. Correct the deficiencies and resubmit the invoice the following month.

If the invoice meets the requirements of Subsection 109.08(c), but has quantities or unit prices exceeding the corresponding quantities and unit prices shown on the Government's receiving report, the Government's data for that item of work will be used. The contractor's invoice, as revised by the Government's receiving report, will be forwarded for processing within 7 days after receiving the invoice. The contractor will be notified, within 7 days of the Government's receipt of the invoice, of the reasons for any changes to the invoice.

(f) Partial payments. Invoices may include the following:

(1) Progress payments may include partial payment for material to be incorporated in the work, provided the material meets the requirements of the contract and is delivered on, or in the vicinity of, the project site or stored in acceptable storage places.

Partial payment for material does not constitute acceptance of such material for use in completing items of work. Partial payments will not be made for living or perishable material until incorporated into the project.

(2) Partial payment for preparatory work. Partial payment for preparatory work does not constitute acceptance of work.

Individual and cumulative partial payments for preparatory work and material will not exceed the lesser of:

- 80 percent of the contract bid price for the item; or
- 100 percent of amount supported by copies of invoices submitted.

The quantity paid will not exceed the corresponding quantity estimated in the contract.

Submit pay notes according to Section 153. Provide a cost breakdown of the bid item components and submit invoices or other documents supporting the partial payment.

The CO may adjust partial payments as necessary to protect the Government.

109.09 Final Payment. Follow the requirements of FAR Clause 52.232-5 Payment under Fixed-Price Construction Contracts and FAR Clause 52.232-27 Prompt Payment for Construction.

Upon final acceptance and verification of final pay records, the Government will send, by certified mail, a final voucher (SF 1034) and a release of claims document. Execute both the voucher and the release of claims, and return the documents to the Government for payment. The date of approval by the Government of the final voucher for payment constitutes the date of final settlement of the contract.

If unresolved claims exist or claims are proposed, reserve the right to the claims by listing a description of each claim and the amount being claimed on the release of claims document.

Failure to execute and return the voucher and release of claims document within 90 days after receipt shall constitute and be deemed execution of the documents and the release of all claims against the Government arising by virtue of the contract. In this event, the day after 90 days from receipt constitutes the date of final settlement of the contract.

Section 151.— MOBILIZATION

Description

151.01 This work consists of moving personnel, equipment, material, and incidentals to the project and performing all work necessary before beginning work at the project site. Mobilization includes the obtaining of permits, insurance, and bonds.

Measurement

151.02 Measure mobilization according to Subsection 109.02.

Payment

151.03 The accepted quantity, measured as provided in Subsection 109.02, will be paid at the contract price per unit of measurement for the Section 151 pay item shown in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

Progress payments for mobilization lump sum will be paid as follows:

- (a) Bond premiums will be reimbursed according to FAR Clause 52.232-5 Payments Under Fixed-Price Construction Contracts, after receipt of the evidence of payment.
- (b) When 5 percent of the original contract amount is earned from other bid items, 50 percent of the mobilization item, or 5 percent of the original contract amount, whichever is less, will be paid.
- (c) When 10 percent of the original contract amount is earned from other bid items, 100 percent of the mobilization item, or 10 percent of the original contract amount, whichever is less, will be paid.
- (d) Any portion of the mobilization item in excess of 10 percent of the original contract amount will be paid after final acceptance.

Section 152.— CONSTRUCTION SURVEY AND STAKING

Description

152.01 This work consists of furnishing qualified personnel and necessary equipment and material to survey, stake, calculate, and record data for the control of work. See FAR Clause 52.236-17 Layout of Work.

Personnel, equipment, and material shall conform to the following:

- (a) **Personnel.** Furnish technically qualified survey crews experienced in highway construction survey and staking. Provide personnel capable of performing in a timely and accurate manner. An acceptable crew supervisor shall be on the project whenever surveying/staking is in progress.
- (b) **Equipment.** Furnish survey instruments and supporting equipment capable of achieving the specified tolerances.
- (c) **Material.** Furnish acceptable tools, supplies, and stakes of the type and quality normally used in highway survey work and suitable for the intended use. Furnish stakes and hubs of sufficient length to provide a solid set in the ground with sufficient surface area above ground for necessary legible markings.

Construction Requirements

152.02 General. The existing alignment and grade will constitute the initial field control for layout of the work. The CO will establish the beginning and end of work at each road. Before surveying or staking, discuss and coordinate the following with the CO:

- (a) Surveying and staking methods
- (b) Stake marking
- (c) Grade control for courses of material
- (d) Referencing
- (e) Any other procedures and controls necessary for the work

Prepare field notes in an approved format. Sample note formats are available as listed in Subsection 106.01. Furnish all survey notes at least weekly. Compute and furnish calculations supporting pay quantities. Measure quantities within the tolerances shown in Table 152-2. All field notes and supporting documentation become the property of the Government upon completion of the work.

Contract Requirements

Project: MT OMAD 18(41), Minuteman Missile Base Roads

Start work only after staking for the affected work is accepted.

The construction survey and staking work may be spot checked for accuracy and unacceptable portions of work may be rejected. Resurvey rejected work and correct work that is not within the tolerances specified in Table 152-2. Acceptance of the construction staking does not relieve the Contractor of responsibility for correcting errors discovered during the work and for bearing all additional costs associated with the error.

Remove and dispose of all flagging, lath, stakes, and other staking material after the project is complete. Remove visible portions of brushes if used to mark grade finishing stakes.

Furnish a practicable schedule of staking activities with the construction schedule submitted according to Section 155. Include the dates and sequence of each staking activity.

At the preconstruction conference, submit a cost breakdown of the individual items included in the lump sum item for use in making progress payments.

152.03 Survey and Staking Requirements. Set Station stakes on even 100-foot stations from beginning to end of work for each road. Perform all additional surveying and staking needed for control of the work.

(a) Intermediate surveying and staking. Perform all survey, staking, recording of data, and calculations as necessary to construct the project from the initial layout to final completion. Reset stakes as many times as necessary to construct the work.

**Table 152-2
Measurement Tolerances**

Pay Unit	Horizontal	Vertical
Linear Foot	0.2 foot or 1:500 whichever is greater	—

152.04 Acceptance. Construction survey and staking will be evaluated under Subsections 106.02 and 106.04.

Measurement

152.05 Do not measure construction survey and staking for payment.

Section 153.— CONTRACTOR QUALITY CONTROL

Description

153.01 This work consists of obtaining samples for Contractor quality control testing, performing tests for Contractor quality control, providing inspection, and exercising management control to ensure that work conforms to the contract requirements. See FAR Clause 52.246-12 Inspection of Construction.

Construction Requirements

153.02 General. Provide a system to address quality control.

A maximum of 10 percent of the total progress payment amount will be retained if the quality control plan is not approved, required updates are not submitted and accepted, or the plan is not being followed.

Furnish 48 hours notice prior to the start of each segment of work.

153.03 Personnel Qualifications. Furnish a Quality Control Manger with at least five years experience in highway or road construction, specifically in the areas of material testing, inspection, management, supervision, and quality control. Duties include coordinating and supervising the quality control system for all work including subcontractors and suppliers. The Quality Control Manager is permitted to perform inspection duties.

Provide a Quality Control Manager on-project during work with the authority to stop work not in compliance or cease work that will result in non-compliance with contract requirements.

The Quality Control Manager is not to directly supervise crews.

Identify an alternate in the Quality Control Manager's absence. An alternate may not act for a period greater than one (1) day unless approved by the CO.

Submit in writing the name, experience, and line of authority of the Quality Control Manager and alternate to the CO for approval 14 days before start of work.

Do not designate the superintendent, project manager, project foreman, or project testing technician as the Quality Control Manager.

Submit to the CO 14 days before start of work the name and experience of inspectors, testers, and company(s) providing quality control. Furnish inspectors with a minimum of 3 years experience in the work to be monitored. Include lines of authority for individuals and the company(s).

153.04 Quality Control Plans. Submit written quality control plans for selected work features to the CO. The acceptance of a plan does not relieve the Contractor from complying with all other contract requirements. Modifications or additions to the plan may be required to meet quality requirements or provide effective implementation. Supplement the plan as work progresses and whenever there are changes in procedures or personnel. Include work accomplished by subcontractors and suppliers both on and off-site.

(a) Development. Develop quality control plans for the following work features.

(1) Erosion control.

(2) Roadway reconditioning:

- Scarification;
- Cross slope control;
- Shoulder grading/cleaning;
- Ditch construction.

(3) Aggregate production:

- Process control;
- Stockpiling.

(4) Aggregate surface course:

- Scale weight verification;
- Cross slope control;
- Width control;
- Spread/depth control;
- Compaction.

Include the following in the plan for selected work features as a supplement to the sampling and testing requirements located at the end of each Section:

- a brief narrative of how the work feature will be accomplished describing methods, crews, and equipment;
- the process to ensure the completed feature of work conforms to contract requirements;
- the inspection or testing, and frequency, to ensure the process remains valid or work is being performed according to the established process;
- the action(s) taken if the inspection or testing reveals the work is not meeting contract requirements.

Perform corrective actions as needed.

Do not duplicate those plans required by other contract provisions. Submit work feature plans a minimum of 14 days prior to the start-up of the work. Defer submission of a quality control plan for items of work not immediately scheduled to begin when approved by the CO. The CO may request additional quality control plans for work features not listed under (a) Development of this Subsection when completed work does not conform to contract requirements or an effective quality control process is lacking.

153.05 Sampling and Testing. Provide a detailed listing of the sampling and testing to be performed for quality control. Include the type of test and frequency of sampling required for each item of work to ensure proper process controls are in effect. See Table 153-1 for a partial listing of Sections requiring sampling and testing to ensure proper process control. Requirements for acceptance sampling and testing can be found in the Acceptance Subsection of each Section.

Sample and split samples according to AASHTO or other acceptable procedures. Allow the CO the opportunity to witness all sampling. Immediately perform splits when required. Deliver the Government's portion of the sample or split in an acceptable container suitable for shipment. Label all samples with the following information:

- (a) Project number;
- (b) Source of material;
- (c) Pay item number;
- (d) Sample number;
- (e) Date sampled;
- (f) Time sampled;
- (g) Location sample taken;
- (h) Name of person sampling;
- (i) Name of person witnessing sampling; and
- (j) Type of test required on sample

153.06 Government Inspection. Provide written notification WFLHD 470 *Notification of Completion of Work* when roadway reconditioning is ready to be inspected. Allow 1 working day for the work to be inspected.

153.07 Records. Submit a list of all records and documentation that track quality control processes and issues. Indicate who will be responsible for maintaining the records and where the records will be located.

Provide the following documents:

(a) Notification of Completion of Work. Submit a completed WFLHD 470 when work is ready for inspection by the Government according to Subsection 153.06.

(b) Construction Operations Report. For each day of work, submit a completed WFLHD 465 *Contractor's Daily Record of Construction Operations* or an approved alternate form. Include the following certification signed by the person responsible for the construction operations:

"I certify the information contained in this record is accurate and all work documented herein complies with the requirements of the contract. Any exceptions to this certification are documented as a part of this record."

(c) Quality Control Report. For each day of work, prepare a Quality Control Report. Record the phase all work is in and document all quality control activities associated with this work. List deficiencies and corrective actions taken or scheduled to be taken. Document meetings or discussions concerning quality control issues. Attach all test results from the day's operations. Include the following certification signed by the Quality Control Manager:

"I certify the information contained in this record is accurate and all work documented herein complies with the requirements of the contract. Any exceptions to this certification are documented as a part of this record."

(d) Control Charts. Maintain linear control charts that identify the project number, contract item number, test number, each test parameter, the upper and/or lower specification limit applicable to each test parameter, and test results. Use the control charts as part of the quality control system to document the variability of the process, identify production and equipment problems, and identify potential pay factor adjustments. Make corrections to the process when problems are evident.

(e) Pay Item Measurement Notes (FHWA 17348 Pay Item Record). Prepare notes according to Subsection 109.01. Calculate and maintain QL-Pay pay factors on appropriate items.

Submit **(b)** and **(c)** reports within one working day of the work being performed. When requested, resubmit incomplete or erroneous reports within one working day. When chronic errors or omissions occur, correct the procedures by which the reports are produced.

153.08 Acceptance. Quality control system will be evaluated under Subsection 106.02 based on the demonstrated ability of the quality control system to result in work meeting the requirements.

If the Government's testing and inspection indicate the quality control system is ineffective or the plan is not being followed, make immediate improvements to the system to correct these inadequacies. Furnish notification in writing of improvements and modifications to the system.

Measurement

153.09 Measure the Section 153 item listed in the bid schedule according to Subsection 109.02.

Payment

153.10 The accepted quantities will be paid at the contract price per unit of measurement for the Section 153 pay item listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

Payments for the lump sum item will be prorated based on the total work completed.

**Table 153-1
Minimum Process Control Sampling and Testing Requirements**

Material or Product	Characteristic	Test Method or Specification	Tolerance	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Section 301							
Aggregate surface course Grading <u> H </u>	Gradation	AASHTO T11 & AASHTO T 27	Subsection 703.05	1 for each 6 hours of production but not less than 2 for each day	Flowing aggregate stream (bin or belt discharge) or conveyor belt	Yes, when requested	End of shift
Imported surface course aggregate	Fractured faces	ASTM D 5821	"	"	"	"	"
	Liquid limit	AASHTO T 89	"	"	"	"	"
	Plasticity Index	AASHTO T 90	"	"	"	"	"
Note: If aggregate is separated into two or more stockpiles, sample and test each of the stockpiles at the minimum sampling frequency.							

Section 154.— CONTRACTOR SAMPLING AND TESTING**Description**

154.01 This work consists of obtaining samples for testing. When there is a contract pay item for Contractor testing included in the bid schedule, it also consists of testing and reporting required test results. It does not include Contractor quality control testing required under Section 153. However, include the work required under this Section in the Section 153 quality control plan.

Construction Requirements

154.02 Sampling. Sample material to be tested according to the Sampling and Testing Requirements tables included at the end of each section. The sampling schedules and times will be provided by the CO using a random number system. In addition, sample any material that appears defective or inconsistent with similar material being produced unless such material is voluntarily removed and replaced or corrected.

Sample and split samples according to AASHTO or other acceptable procedures. Allow the CO the opportunity to witness all sampling. Immediately perform splits when required. Deliver the Government's portion of the sample or split sample in a new 5 gallon plastic bucket with lid for shipping. Label all samples with the following information:

- (a) Project number;
- (b) Source of material;
- (c) Pay item number;
- (d) Sample number;
- (e) Date sampled;
- (f) Time sampled;
- (g) Location sample taken;
- (h) Name of person sampling;
- (i) Name of person witnessing sampling; and
- (j) Type of test required on sample.

When samples are required at the Vancouver Laboratory, send to:

Material Section
Western Federal Lands Highway Division
610 East Fifth Street
Vancouver, Washington 98661

If samples are sent other than normal delivery vendors, call 360.619.7747 or 360.619.7592 prior to delivery. Deliveries will be accepted from 7 a.m. to 2:30 p.m. PT (Monday - Friday).

Access to the government complex is controlled, check-in is required at the main building entrance located on East Fifth Street. Directions will be given for delivery of samples.

The sampling frequencies and reporting times are listed in the individual sections ordering the work. See Section 301, Table 301-1 for additional sampling and testing requirements.

154.03 Testing. When there is a contract pay item for Contractor testing included in the bid schedule, perform all tests required by the Sampling and Testing Requirements tables at the end of each section. Allow the CO the opportunity to witness all testing. Testing of trial samples may be required to demonstrate testing competence.

154.04 Records. Report test results on forms containing all sample information required by Subsection 154.02. Label clearly all interim measurements used to determine the results. Attach work sheets used to determine test values to the test result forms when submitted. When tests are on material being incorporated in the work, report test results within 24 hours except as specified in the Sampling and Testing Requirements tables. Payment for work may be delayed or the work suspended until test results are provided.

154.05 Acceptance. Contractor sampling and testing will be evaluated under Subsections 106.02 and 106.04 based on Government verification testing.

Measurement

154.06 Measure the Section 154 items listed in the bid schedule according to Subsection 109.02.

Payment

154.07 The accepted quantities will be paid at the contract price per unit of measurement for the Section 154 pay item listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

Progress payments for Contractor testing will be paid as follows:

(a) 25 percent of the item amount, not to exceed 0.5 percent of the original contract amount, will be paid after all the testing facilities are in place, qualified sampling and testing personnel are identified, and the work being tested has started.

(b) Payment for the remaining portion of the item amount will be prorated based on the total work completed.

Payment for all or part of this item may be retained, if Government verification testing invalidates the Contractor testing or the CO determines that documentation of sampling and testing is not adequate.

Section 155.— SCHEDULES FOR CONSTRUCTION CONTRACTS

Description

155.01 This work consists of scheduling and monitoring all construction activities. Follow the requirements of FAR Clause 52.236-15, Schedules for Construction Contracts.

Construction Requirements

155.02 Preliminary Work Plan. Do not begin work, except mobilization, and traffic control without an accepted preliminary work plan.

A preliminary work plan is a written narrative of contract activities for the first 45 days after the Notice to Proceed has been issued. Include the following:

- A title page stating the contract number, project number, project name, Contractor name, current fixed completion date, date of submittal, submittal number, and “*Preliminary Work Plan*”;
- Describe work to be done within each activity including the type and quantity of equipment, labor, and materials to be used;
- Describe planned production rates by pay item quantities (e.g. cubic yarads of roadway excavation per day);
- Describe the number of work days per week, holidays, number of shifts per day, and number of hours per shift. Include all calendars used in the schedule module.
- Estimate periods during which an activity is idle or partially idle. Include beginning and end dates.
- Describe expected and critical delivery dates for equipment or material that can affect timely completion of the project;
- Identify the Vendor, Supplier, or Subcontractor to perform an activity. State assumptions made in scheduling their work.

Submit 3 copies of a preliminary work plan at least 7 days before the preconstruction conference. Within 7 days after the preconstruction conference, the preliminary work plan will be accepted or rejected. If rejected, submit a revised plan within 3 days.

155.03 Initial Construction Schedule. Prepare a construction schedule according to Subsection 155.04. Submit 3 paper copies and one electronic copy of the initial construction schedule within 20 days after the Notice to Proceed has been issued. In case of discrepancy, the paper version will govern over the electronic version of the schedule.

Show completion of work within the contract time.

Allow 7 days for approval or rejection of the schedule. If rejected, submit a revised schedule within 7 days.

Use the approved initial construction schedule as the baseline for the first construction schedule update.

A maximum of 10 percent of the total progress payment amount will be retained if an acceptable schedule is not received within 30 days after the Notice to Proceed is issued.

155.04 Construction Schedule. A construction schedule is a Critical Path Method (CPM) schedule and a written narrative. Include the following:

(a) A CPM schedule including the following:

- (1) A title page or header block with the contract number, project number, project name, Contractor name, current fixed completion date, date of submittal, and submittal number;
- (2) Show activity descriptions. Define and code activities to the contract pay items. Include activities for submittals, submittal reviews, fabrication, and deliveries. Do not include activities for continuous, non-critical items such as flagging, traffic control, QA/QC, etc;
- (3) Show activity durations. Break activities into subtasks such that no activity duration exceeds 30 calendar days. Break longer activities into two or more activities distinguished by location or some other description;
- (4) Show early start and finish dates;
- (5) Show late start and finish dates;
- (6) Show total float and free float;
- (7) Show predecessors;
- (8) Use a time scale to graphically show the work scheduled for performance;
- (9) Show the sequence and interdependence of all activities; and
- (10) Identify the critical path.

Float is a shared commodity and is not for the exclusive use of the contractor or the Government. Either party has the full use of float until it is depleted.

(b) A written narrative stating the bases and assumptions underlying the schedule including:

- (1) Describe work to be done within each activity including the type and quantity of equipment, labor, and materials to be used;
- (2) Describe planned production rates by pay item quantities (e.g. cubic yards of roadway excavation per day);
- (3) Describe the number of work days per week, holidays, number of shifts per day, and number of hours per shift. Include all calendars used in the schedule module.
- (4) Estimate periods during which an activity is idle or partially idle. Include beginning and end dates.
- (5) Describe expected and critical delivery dates for equipment or material that can affect timely completion of the project;
- (6) Identify the Vendor, Supplier, or Subcontractor to perform an activity. State assumptions made in scheduling their work.

155.05 Updated Construction Schedule. Prepare a construction schedule according to Subsection 155.04. Submit three paper copies and one electronic copy of an updated construction schedule for acceptance by the 15th day of each month or when:

- (a) A delay occurs in the completion of a critical (major) activity;
- (b) A delay occurs which causes a change in the critical path for the CPM schedule;
- (c) The actual prosecution of the work is different from that represented on the current construction schedule;
- (d) There is an addition, deletion, or revision of activities caused by a contract modification;
or
- (e) There is a change in the schedule logic.

Show completion of work within the contract time.

Allow 7 days for approval or rejection of the schedule. If rejected, submit a revised schedule within 7 days.

Use the approved initial or previous construction schedule as the baseline for the current construction schedule update.

A maximum of 10 percent of the total progress payment amount will be retained if an acceptable schedule is not received by the 15th day of the month.

Contract Requirements

Project: MT OMAD 18(41), Minuteman Missile Base Roads

155.06 Records. Submit a list of all records and documents that track progression of work. Indicate who will be responsible for maintaining the records and where the records will be located.

Provide the following documents:

(a) Notification of Completion of Work. Submit a completed WFLHD 470 *Notification of Completion of Work* when work is ready for inspection by the Government according to Subsection 153.06.

(b) Construction Operations Report. For each day of work, submit a completed WFLHD 465 *Contractor's Daily Record of Construction Operations* or an approved alternate form. Include the following certification signed by the person responsible for the construction operations:

"I certify that the information contained in this record is accurate, and that all work documented herein complies with the requirements of the contract. Any exceptions to this certification are documented as a part of this record."

For an electronic version of the form go to:

<http://www.wfl.fha.dot.gov/other/it/forms/wflhd465A.pdf>

155.07 Acceptance. Construction schedules, records, and documents will be evaluated under Subsection 106.02.

Measurement

155.08 Measure the Section 155 items listed in the bid schedule according to Subsection 109.02.

Payment

155.09 The accepted quantities will be paid at the contract price per unit of measurement for the Section 155 pay item listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

Progress payments for construction schedule will be paid as follows:

(a) 25 percent of the item amount, not to exceed 0.5 percent of the original contract amount, will be paid after the construction schedule is accepted.

(b) Payment of the remaining portion of the lump sum will be prorated based on the total work completed.

Section 156.— PUBLIC TRAFFIC

Description

156.01 This work consists of controlling and protecting public traffic adjacent to and within the project. See FAR Clause 52.236-13 Accident Prevention.

Material

156.02 Conform to the following Section:

Temporary Traffic Control	635
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Construction Requirements

156.03 Accommodating Traffic During Work. Accommodate traffic according to the contract traffic control plan, MUTCD, Section 635, and this Section. The Contractor may submit an alternate traffic control proposal. Submit alternate traffic control proposals according to Subsection 104.03 for acceptance at least 30 days before intended use.

Perform work in a manner that ensures the safety and convenience of the public and protects the residents and property adjacent to the project. Accommodate public traffic on roads adjacent to and within the project until the project is accepted according to Subsection 106.07(b).

On the portions of the project used to accommodate public travel, operate construction equipment and vehicles in a manner that does not conflict with traffic flow and minimizes delays to the traveling public.

156.04 Maintaining Roadways During Work. Perform roadway maintenance as follows:

- (a) Construct and remove diversion roads and bridges as required by the traffic control plan.
- (b) Maintain intersections with trails, roads, streets, businesses, parking lots, residences, garages, farms, and other features.
- (c) Snow removal to facilitate the work is the Contractor's responsibility. Snow removal to provide public access is the responsibility of the maintaining agency and will be performed at the maintaining agency's discretion. Allow the maintaining agency access to perform snow removal.
- (d) Maintain a dust-free traveled way such that visibility and air quality are not affected and a hazardous condition is not created.

(e) Remove accumulations of soil and other material from traveled way.

(f) Maintain the roadway, detours, and diversions in a safe and acceptable condition. If corrective action is requested and the corrective action is not taken immediately, the condition may be corrected and the cost of the corrective action deducted from monies due the Contractor.

156.05 Maintaining Roadways During Non-Work Periods. Maintain roadways and traffic control for public traffic during all periods when work is not in progress. Snow removal to provide public access is the responsibility of the maintaining agency.

156.06 Limitations on Construction Operations. When the roadway is open to public traffic, restrict operations as follows:

(a) Operate equipment in the direction of traffic, where practical.

(b) For shoulder drop-offs in excess of 2 inches, provide “*Low Shoulder*” warning signs. For shoulder drop-offs in excess of 4 inches, provide a 1V:3H fillet with “*Low Shoulder*” warning signs. Complete the construction of shoulders adjacent to traffic lanes to the same elevation within 14 days.

(c) Provide minimum lane widths of 10 feet. Use barricades, drums, or other acceptable devices to delineate traffic lanes through areas where the edge of pavement or intended path has been obliterated by construction operations.

(d) Locate staging areas at least 30 feet from the traveled way or behind acceptable traffic barriers. Obtain approval of the location and access to staging areas. Store unused traffic control devices at staging areas.

(e) Park equipment at least 30 feet from the traveled way or behind acceptable traffic barriers.

(f) Provide parking areas for employees' personal vehicles in approved areas.

(g) Provide two-way radio communications between flaggers, and pilot cars. Provide two-way radio communications between flaggers unless flaggers are able to see each other and communicate. Citizen band radios are not acceptable. Make radio equipment available to the CO as necessary.

(h) Where switching traffic to a completed lane, provide adequate personnel and equipment to set or relocate traffic control devices.

(i) Limit construction-caused delays to public traffic to a maximum of 30 minutes per passage through the project.

(j) For purposes of facilitating traffic, perform grading or surfacing part-width at a time. Make the width not under construction available to public traffic under alternate one-way control. Furnish pilot car and driver, or flaggers, or both, as ordered by the CO, to direct traffic through sections of road under one-way control.

(k) Do not have more than three roads under construction (road reconstruction or surfacing) at any given time.

(l) Immediately open the road to all missile transport vehicles.

(m) Do not allow berms or windrows to remain on the road overnight.

156.07 Nighttime Operations. Perform construction operations during the hours of daylight (½ hour after sunrise to ½ hour before sunset).

Where night operations are permitted, submit a night lighting system for approval. Include the light types, locations, and the manner in which the lights will be moved. Submit the proposed system at least 14 days before use. Use an independent source other than vehicle headlights. Do not use incandescent lights. Furnish and install the approved system to illuminate the entire work area. Position the lights so they do not shine directly at motorists traveling from any direction. If the operation is moving, move the lighting with the operation. Provide lighting at each flagger location. Equip all vehicles with an exterior flashing yellow dome light.

156.08 Reserved.

156.09 Acceptance. Public traffic work will be evaluated under Subsection 106.02.

Traffic control devices and services will be evaluated under Section 635.

Measurement and Payment

156.10 See Subsection 109.05.

Measure traffic control under Section 635.

Measure dust abatement under Section 158.

Section 157.— SOIL EROSION CONTROL

Description

157.01 This work consists of furnishing, constructing, and maintaining temporary erosion and sediment control measures.

Material

157.02 Conform to the following Subsections:

Erosion control wattles, logs, and rolls 713.13

Construction Requirements

157.03 General. Provide temporary erosion control measures to minimize erosion and sedimentation during and after construction according to the contract erosion control plan, contract permits, Section 107, and this Section. Contract permits amend the requirements of this Section. Do not modify the type, size, or location of any control or practice without approval.

The contract erosion control plan reflects special concerns and measures to protect resources. An alternate erosion control proposal, with all necessary permits, may be submitted for acceptance according to Subsection 104.03. Submit alternate erosion control proposals at least 30 days before their intended use.

When erosion control measures are not functioning as intended, immediately take corrective action.

157.04 Controls and Limitations on Work. Before grubbing and grading, construct all erosion controls.

Construct erosion control and sediment control measures as follows:

- (a) Construct temporary erosion controls in incremental stages as construction proceeds;
- (b) Construct and maintain erosion controls on and around soil stockpiles to prevent soil loss;
- (c) Following each day's grading operations, shape earthwork to minimize and control erosion from storm runoff.

157.05 Filter Barriers. Construct wattles for filtering sediment from runoff and reducing the velocity of sheet flow.

157.06 Waterway and Slope Protection and Stabilization. Use check dams as follows:

(a) **Check dams.** Construct temporary straw wattle dams to reduce the velocity of runoff in ditches and swales and around culverts that lead to standing and flowing water.

157.07 Inspection and Reporting. Inspect all erosion control facilities at least every 7 days, within 24 hours after more than 3/8 inch of rain in a 24-hour period, and as required by the contract permits.

Within 24 hours, furnish inspection reports to the CO which include all of the following:

- (a) Summary of the inspection;
- (b) Names of personnel making the inspection;
- (c) Date and time of inspection;
- (d) Observations made; and
- (e) Corrective action necessary, action taken, and date and time of action.

157.08 Maintenance and Cleanup. Maintain temporary erosion control measures in working condition until the project is complete or the measures are no longer needed. Clean erosion control measures when half full of sediment. Use the sediment in the work, if acceptable, or dispose of it according to Subsection 107.01.

Replace erosion control measures that cannot be maintained and those that are damaged by construction operations.

Remove and dispose of temporary erosion control measures when the vegetation is satisfactorily established and drainage ditches and channels are lined and stabilized. Remove and dispose of erosion control measures according to the procedures shown in Subsection 157.10.

Restore the ground to its natural or intended condition and provide permanent erosion control measures.

157.09 Disposing of Material. Dispose of debris and unsuitable and excess material as follows:

(a) **Remove from project.** Recycle or dispose of material legally off the project. Furnish a statement documenting the nature and quantity of material processed or sold for recycling. Otherwise, furnish a signed copy of the disposal agreement before disposal begins.

(b) **Burn.** Obtain necessary burning permits. Furnish a copy of the burning permits before burning begins.

Burn using high intensity burning processes that produce few emissions. Examples include incinerators, high stacking, or pit and ditch burning with forced air supplements. Provide a competent watchperson during the burning operations.

When burning is complete, extinguish the fire so no smoldering debris remains. Dispose of unburned material according to **(a)** above.

(c) Bury. Bury debris in trenches or pits in approved areas within the right-of-way. Do not bury debris inside the roadway prism limits, beneath drainage ditches, or in any areas subject to free-flowing water.

Place debris in alternating layers of 4 feet of debris covered with 2 feet of earth material. Distribute stumps, logs, and other large pieces to form a dense mass and minimize air voids. Cover the top layer of buried debris with at least 1 foot of compacted earth. Grade and shape the area.

(d) Hazardous material. Furnish a copy of all disposal permits. Dispose of material according to Subsection 107.01 and 107.10 and all Federal, State, and local regulations.

157.10 Maintenance and Cleanup. Remove and dispose of temporary erosion control measures as directed by the CO. Recycle or dispose of material legally off the project.

157.11 Acceptance. Material for soil erosion control measures, construction, maintenance, and removal of soil erosion control measures will be evaluated under Subsection 106.02.

Measurement

157.12 Measure the Section 157 items listed in the bid schedule according to Subsection 109.02 and the following as applicable.

Do not measure replacement items.

Payment

157.13 The accepted quantities will be paid at the contract price per unit of measurement for the Section 157 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

Progress payments for erosion control measures will be made as follows:

(a) 50 percent of the unit bid price will be paid upon installation.

(b) An additional 25 percent of the unit bid price will be paid following completion of 50 percent of the contract amount.

(c) Payment of the remaining portion of the unit bid price will be paid when the temporary erosion control measures are removed from the project.

Contract Requirements

Project: MT OMAD 18(41), Minuteman Missile Base Roads

Section 158.— WATERING FOR DUST CONTROL

Description

158.01 This work consists of furnishing and applying water required for the compaction of surfaces, and the finishing, modification and reconditioning of roadbeds. This work also consists of furnishing and applying water for the control of dust caused by the above operations and public travel within the project limits as well as public roadways used in the transportation of aggregates from Contractor-located sources.

Material

158.02 Conform to the following Subsection:

Water

725.01

Construction Requirements

158.03 General. There are no Government designated water sources for this project. Coordinate authorizations for obtaining water with the Montana State Department of Natural Resources and Conservation. Provide an adequate water supply and apply water needed at all hours (including nights, weekends, and periods of nonwork) as necessary to control dust. Uniformly apply water using pressure-type distributors, pipelines equipped with spray systems, or hoses with nozzles.

(a) Project dust control for public benefit. Control dust within the construction limits at all hours when the project is open to public traffic. When the project is not open to public traffic, control dust in areas of the project which neighbor inhabited residences or places of business. Control dust on approved, active detours established for the project. Apply water at the locations, rates, and frequencies ordered by the CO.

(b) Other dust control. Control dust on active haul roads, in pits and staging areas, and on the project during all periods not covered in **(a)** above.

(c) Water for use in construction. Add water as necessary to properly construct the road.

158.04 Acceptance. Furnishing and placing water will be evaluated under Subsection 106.02.

Measurement

158.05 Measure the Section 158 items listed in the bid schedule according to Subsection 109.02 and the following as applicable.

Contract Requirements

Project: MT OMAD 18(41), Minuteman Missile Base Roads

Measure water for dust control by the m-gallon in the hauling vehicle by metering, or by weighing and converting to the unit of measure using standard conversion factors.

Measure water for the compaction of surfaces and the finishing, modification, and reconditioning of roadbeds described in Subsection 158.01 by the m-gallon in the hauling vehicle by metering, or by weighing and converting to the unit of measure using standard conversion factors.

Do not measure water for dust control applied according to Subsection 158.03**(b)**.

Payment

158.06 The accepted quantities will be paid at the contract price per unit of measurement for the Section 158 pay item listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

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Division 200 has been intentionally omitted.

Section 301.— UNTREATED AGGREGATE COURSES

Description

301.01 This work consists of constructing one or more courses of aggregate on a prepared surface.

Surface aggregate grading is designated as shown in Table 703-3.

Material

301.02 Conform to the following Subsections:

Surface Course Aggregate	703.05
Water	725.01

Construction Requirements

301.03 General. Prepare the surface on which the aggregate course is placed according to Section 303 as applicable.

After a representative quantity of aggregate is produced, submit proposed target values for the appropriate sieve sizes to the CO. Set target values for the surface course aggregate within the gradation ranges shown in Table 703-3. List the percent passing for all sieve sizes shown in Table 703-3.

301.04 Mixing and Spreading. Determine the optimum moisture content according to AASHTO T 180 method D. Mix the aggregate and adjust the moisture content to obtain a uniform mixture with a moisture content within 2 percent of the optimum moisture content. Spread and shape the mixture on the prepared surface in a uniform layer.

Do not place the mixture in a layer exceeding 6 inches in compacted thickness. When more than one layer is necessary, compact each layer according to Subsection 301.05 before placing the next layer. Route hauling equipment uniformly over the full width of the surface to minimize rutting or uneven compaction.

301.05 Compacting. Compactive effort may be decreased provided in-place field densities demonstrate that a lesser compactive effort will meet or exceed 95% maximum compacted density. Determine the maximum density of the mixture according to AASHTO T 180 method D. Determine the in-place density and moisture content according to AASHTO T 310 or other approved test procedures.

Compact each layer to at least 95 percent of maximum density.

Roll gradually from the side to the center, parallel with the centerline of the road, and shall continue until all the surface has been rolled. Correct any irregularities or depressions that develop. Along curbs, headers, and walls, and at all places not accessible to the roller, compact material with mechanical tampers.

Contract Requirements

Project: MT OMAD 18(41), Minuteman Missile Base Roads

Use compaction equipment meeting the following minimum requirements:

- (a) Non-vibratory steel-wheel rollers having a mass of not less than 10 tons.
- (b) Vibratory steel-wheel rollers having a minimum mass of 8 tons and equipped with amplitude and frequency controls and specifically designed to compact the material on which it is used.
- (c) Pneumatic-tire rollers with smooth tread tires of equal size having a minimum mass of 2000 lb per wheel and a contact pressure of at least 80 Psi.

301.06 Surface Tolerance. Shape the surface to the required template and check the surface with a 10-foot straightedge. Defective areas are surface deviations in excess of 1/2 inch in 10 feet between any two contacts of the straightedge with the surface.

Correct all defective areas by loosening the material, adding or removing material, reshaping, and compacting.

301.07 Maintenance. Maintain the aggregate course to the correct line, grade, and cross-section by blading, watering, rolling, or any combination thereof until placement of the next course. Correct all defects according to Subsection 301.06.

301.08 Acceptance. See Table 301-1 for sampling and testing requirements and the acceptance quality characteristic category.

Aggregate gradation, fractured faces, liquid limit and plasticity index will be evaluated under Subsection 106.05. Other aggregate quality properties will be evaluated under Subsections 106.02 and 106.04.

(a) **Aggregate gradation.** The upper and lower specification limits are equal to the calculated mean of all test results plus or minus the allowable deviations shown in Table 703-3, except as follows:

- (1) If the calculated mean value for any tested sieve exceeds the maximum gradation value shown in Table 703-3, the upper specification is equal to the maximum gradation value plus the allowable deviation, and the lower specification is equal to the maximum gradation value minus the allowable deviation.

(2) If the calculated mean value for any tested sieve is less than the minimum gradation value shown in Table 703-3, the upper specification is equal to the minimum gradation value plus the allowable deviation and the lower specification is equal to the minimum gradation value minus the allowable deviation.

(b) **Fractured faces.** When aggregate is produced from a gravel source, use the specification limit shown in Subsection 703.05(f).

(c) **Liquid limit.** The specification limit is shown in Subsection 703.05(g).

(d) **Plasticity index.** The specification limit is shown in Subsection 703.05(h).

Measurement

301.09 Measure the Section 301 items listed in the bid schedule according to Subsection 109.02 and the following as applicable.

Measure aggregate by the ton.

Water will be paid for as provided under Section 158.

Payment

301.10 The accepted quantities will be paid at the contract price per unit of measurement adjusted according to Subsection 106.05 for the Section 301 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

**Table 301-1
Sampling and Testing Requirements**

Material or Product	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Aggregate source quality 703.05(a)	Measured and tested for conformance (106.04 & 105)	LA abrasion (coarse) Sodium sulfate soundness loss (course & fine) Durability index (course & fine) Accelerated weathering	—	AASHTO T 96 AASHTO T 104 AASHTO T 210 WFLHD-DMSO	1 per type & not less than 5 per source of material (1)	Source of material " " "	Yes, when requested " " "	Before using in work " " "

(1) Furnish a minimum of five reports, but not less than one report per rock type for each source. Reports must be dated within 1 year of intended use. Obtain samples representative of aggregates being furnished. Include rock type and sample location on test reports.

**Table 301-1 (continued)
Sampling and Testing Requirements**

Material or Product	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time	
Surface course aggregate, Grading H	Statistical (106.05)	Gradation		AASHTO T 27 & T 11	1 per 1000 tons	From windrow or roadbed after processing	Yes	4 hours	
		No. 4	I						
		No. 40	I						
		No. 200	I						
	Other specified sieves	II							
	Liquid limit	II		AASHTO T 89	"	"	"	"	
	Plasticity index	II		AASHTO T 90	"	"	"	"	
	Fractured faces	II		ASTM D5821	"	"	"	"	
	Measured and tested for conformance (106.04)		Moisture-density (max. density)	—	AASHTO T 180, method D ⁽²⁾ or other approved procedures	1 per type & source of material	Source of material	Yes	Before using in work
			Density	—	AASHTO T 310 or other approved procedures	1 per 500 tons	In-place	—	Before placing next layer

(2) Minimum of 5 points per proctor.

Section 302.— TREATED AGGREGATE COURSES

Description

302.01 This work consists of constructing a treated aggregate course by incorporating lime into an existing in-place aggregate layer.

Material

302.02 Conform to the following Subsections:

Lime (Hydrated)	725.03
Water	725.01

Construction Requirements

302.03 Proportioning. Before beginning operations, determine the maximum density and optimum moisture content of the aggregate course to be treated according to AASHTO T 180, method D. The target lime content is 0.5% by weight of the material at 95% of the maximum density. The target water content at the time of mixing is 2% above the optimum moisture content.

302.04 General. Use distributor equipment capable of applying lime in a uniform layer across the full width of the surface to be mixed. Distribution equipment must be capable of closely metering the application rate. As an alternative, rotary mixing machines capable of metering lime and/or water into the mixing process are allowed, provided the required application rates and tolerances are met.

Use rotary mixing equipment to incorporate the lime into the treated aggregate course full depth in one pass.

302.05 Preparation. Prepare the surface on which the treated aggregate course is placed according to Section 303 as applicable.

302.06 Spreading and Mixing. Apply lime when the ambient air temperature is 35 °F or above. Do not begin spreading and mixing operations when the atmospheric temperature is expected to fall below 35 °F within 24 hours. Do not construct the treated aggregate course when the underlying surface is frozen, muddy, or when it is raining or snowing. Do not spread dry lime in windy conditions that will result in loss of lime and dusting.

Maintain the accuracy of the amounts of lime and water added within the following tolerances:

Lime	+0.5% by mass (Weight added ranges from 0.5% to 1% as determined in Subsection 302.03)
Water	±1.0% by mass (Moisture content ranges from 1% above optimum to 3% above optimum as determined in Subsection 302.03)

Contract Requirements

Project: MT OMAD 18(41), Minuteman Missile Base Roads

Spread lime uniformly across the prepared aggregate surface. Verify the application rate by performing lime weight yield test panels for each distributor load. Do not spread more lime than can be incorporated within one hour. The depth of aggregate mixing is 4 inches ± 0.5 inch in its compacted state. Mix the lime completely and uniformly into the aggregate course with the rotary mixing equipment. Add water to provide the required moisture content, and immediately remix with rotary mixing equipment. As an alternative, if the required lime and water is metered in with the rotary mixing equipment during the initial pass, remixing is not required.

After all mixing is complete, shape the road to the required cross section.

302.07 Compacting and Finishing. Compact and finish the treated aggregate course according to Subsections 301.05, and 301.06. Maintain the mixing moisture content during the compaction, and finishing phases.

302.08 Acceptance. See Table 302-3 for sampling and testing requirements and the acceptance quality characteristic category.

Lime will be evaluated under Subsections 106.02 and 106.03.

Construction of treated aggregate courses will be evaluated under Subsections 106.02 and 106.04.

Preparation of the existing in-place aggregate layer will be evaluated under Section 303.

Measurement

302.09 Measure the Section 302 items listed in the bid schedule according to Subsection 109.02 and the following as applicable.

Measure the square yard width horizontally to include the top of aggregate width including designed widenings. Measure the square yard length horizontally along the centerline of the roadway.

Payment

302.10 The accepted quantities will be paid at the contract price per unit of measurement according to Subsection 106.04 for the Section 302 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

**Table 302-3
Sampling and Testing Requirements**

Material or Product	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Mixture (302)	Measured and tested for conformance (106.04)	Moisture-density	—	AASHTO T 180, method D ⁽¹⁾	1 per road segment	Existing roadway surface	Yes, when requested	Before using in work
		Compaction	—	AASHTO T 310 or other approved procedures	1 per 500 tons	In-place, After treatment	—	Before placing next layer

(1) Minimum of 5 points per proctor.

Section 303.— ROAD RECONDITIONING

Description

303.01 This work consists of reconditioning ditches, shoulders, roadbeds, and aggregate surfaces.

Material

303.02 Conform to the following Subsections:

Surface course aggregate	703.05
Water	725.01

Construction Requirements

303.03 General. Blade off vegetation growing on the shoulders to allow for adequate drainage. Uniformly drift material onto the adjacent slopes leaving a smooth surface free of clods, berms, and clumps. In areas where the minimum ditch does not exist, grade in slopes and ditches to construct the ditch as shown on the typical section.

Repair soft and unstable areas. Backfill the excavated areas with surface course aggregate. Compact the aggregate backfill according to Subsection 303.05.

Dispose of excess material and/or unsuitable material in low areas along the slopes.

Do not disturb existing slopes outside of the ditch line unless directed by the CO.

303.04 Reserved.

303.05 Aggregate Surfaces. Loosen the top 2 inches of the existing roadbed from shoulder to shoulder including road approaches by blading and/or scarifying. Reprocess with water, reshape, and compact. Compact the roadbed with a minimum of three passes of a roller conforming to Subsection 301.05.

303.06 Reserved.

303.07 Finishing Road Surfaces.

(a) **Graded roadbeds.** Blade, shape, compact, and finish the roadbed, including parking areas, turnouts and other widened areas. Correct irregularities in the surface by scarifying the defective area and reworking.

(b) **Aggregate surfaces.** Finish the surface according to Subsection 301.06. Compact the surface according to Subsection 301.05.

303.08 Scarification. When required by the contract, scarify the material to the designated depth and width. Pulverize all lumps to a size one and one half times the maximum sized aggregate or to 1 ½ inches, whichever is greater. Mix, spread, compact, and finish the material according to Section 301.

303.09 Acceptance. Road reconditioning work will be evaluated under Subsections 106.02 and 106.04.

Measurement

303.10 Measure the Section 303 items listed in the bid schedule according to Subsection 109.02 and the following as applicable. Reconditioning of existing approach roads and connections to gravel public roads will not be measured.

Removal and disposal of unsuitable material and compacting backfill aggregate will be measured for payment under Section 622. Water will be measured for payment under Section 158. Aggregate will be measured for payment under Section 301.

Payment

303.11 The accepted quantities will be paid at the contract price per unit of measurement for the Section 303 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

**Table 303-1
Sampling and Testing and Requirements**

Material or Product	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Existing roadbed	Measured and tested for conformance (106.04)	Classification	—	AASHTO M 145	1 per soil type	Roadbed	Yes, when requested	Before using in work
		Moisture-density	—	AASHTO T 180, method D ⁽¹⁾	1 for each mixture or change in material	Processed material before incorporating in work	—	Before using in work
		In-place density & moisture content	—	AASHTO T 310 or other approved procedures	1 per 3000 yd ²	Compacted material	—	End of shift

(1) Minimum 5 points per proctor.

Section 304.— AGGREGATE STABILIZATION

Description

304.01 This work consists of constructing a stabilized aggregate layer with either imported or in-place aggregate. The aggregate layer is stabilized by incorporating a solid form of calcium chloride.

Aggregate stabilization is designated as imported aggregate course or in-place aggregate course.

Aggregate grading is designated as shown in Table 703-3.

Material

304.02 Conform to the following Subsections:

Imported surface course aggregate	703.05A
Calcium chloride (flake/pellet)	725.02
Water	725.01

Construction Requirements

304.03 Proportioning. Determine the proportioning amounts of aggregate, calcium chloride, and water required according to (a) or (b) below.

(a) **Imported aggregate course.** Determine the optimum moisture content according AASHTO T 180, method D. The target calcium chloride content is 2 percent by weight of the material at 95 percent of the maximum density. The target water content at the time of mixing is from 2 percent below the optimum moisture content to optimum moisture content.

(b) **In-place aggregate course.** Before beginning stabilization operations, sample the in-place aggregate course and determine the maximum density and optimum moisture content according to AASHTO T 180, method D. The target calcium chloride content is 2 percent by weight of the material at 95 percent of the maximum density. The target water content at the time of mixing is from 2 percent below the optimum moisture content to optimum moisture content.

304.04 General. After a representative quantity of aggregate is produced, submit proposed target values for the appropriate sieve sizes to the CO. Set target values for the surface course aggregate within the gradation ranges shown in Table 703-3. List the percent passing for all sieve sizes shown in Table 703-3.

Store calcium chloride in closed, weatherproof containers. Begin application or mixing operations only when the ambient air temperature is 40 °F or above, and is not expected to fall below 40 °F within 48 hours. Do not construct the stabilized aggregate layer when the underlying surface is frozen, muddy, or when it is raining or snowing. Do not discharge calcium chloride into any waters of the U.S.

(a) Imported aggregate course. Prepare the underlying surface according to Subsection 303.05.

(b) In-place aggregate course. Repair soft and unstable areas to the full depth of the aggregate surface and according to Subsection 303.03 when applicable. Scarify to a depth of 3 inches and remove surface irregularities. Shape the scarified aggregate into a blanket that is suitable for applying calcium chloride.

304.05 Mixing and Placing. Maintain the accuracy of the amounts of calcium chloride and water content within the following tolerances:

Calcium chloride $\pm 0.5\%$ by mass (Weight added ranges from 1.5 percent to 2.5 percent as determined in Subsection 304.03)

Water $\pm 1.0\%$ by mass (Moisture content ranges from 2 percent below optimum to optimum as determined in Subsection 304.03)

(a) Imported aggregate course. Use a stationary pugmill with weighing or metering equipment capable of accurately controlling the material entering the mixer. Interlock the metering controls for the aggregate feed with those of the calcium chloride and water to ensure uniform introduction of material into the mixer. Maintain the accuracy of the amounts of aggregate, calcium chloride, and water (based on the total dry mass) within the following tolerances:

Aggregate $\pm 2.0\%$ by mass

Calcium chloride $\pm 0.5\%$ by mass

Water $\pm 1.0\%$ by mass

Immediately after mixing, haul and spread the material on the prepared surface in a uniform layer. Shape the road to the required cross-section. Route hauling equipment uniformly over the full width of the surface to minimize rutting or uneven compaction.

(b) In-place aggregate course. Adjust the moisture content of the aggregate layer to from 0 to 2 percent below optimum. Do not spread calcium chloride in windy conditions that will result in loss of calcium chloride and dusting.

Use distributor equipment capable of applying calcium chloride in a uniform layer across the full width of the surface to be mixed. Distribution equipment must be capable of closely metering the application rate. As an alternative, rotary mixing machines capable of metering calcium chloride and/or water into the mixing process are allowed, provided the required application rates are met.

Use rotary mixing equipment to incorporate the calcium chloride into the treated aggregate course full depth in one pass.

Spread calcium chloride uniformly across the prepared aggregate surface. Verify the application rate by performing calcium chloride weight yield test panels for each distributor load. Do not spread more calcium chloride than can be incorporated within one hour. The depth of aggregate mixing is 3 inches \pm 0.5 inch in its compacted state. Mix the calcium chloride uniformly into the aggregate course with the rotary mixing equipment.

After mixing is complete, shape the road to the required cross section.

304.06 Reserved.

304.07 Compacting and Finishing. While placing and spreading the mixture, maintain the moisture content from optimum to 2 percent below optimum. Compact the mixture according to Subsection 301.05. Determine the in-place density and moisture content according to AASHTO T 310 or other approved test procedures.

Finish the aggregate course according to Subsection 301.06 to produce a surface that is smooth, dense, and free of compaction planes, ridges, or loose material.

304.08 Reserved.

304.09 Reserved.

304.10 Acceptance. See Table 304-1 for sampling and testing requirements.

Calcium chloride will be evaluated under Sections 106.02 and 106.03.

New imported aggregate will be evaluated for gradation, fractured faces, liquid limit, and plasticity index under Subsection 106.05. Other aggregate quality properties will be evaluated under Subsections 106.02 and 106.04.

(a) Aggregate gradation. The upper and lower specification limits are equal to the calculated mean of all test results plus or minus the allowable deviations shown in Table 703-3, except as follows:

(1) If the calculated mean value for any tested sieve exceeds the maximum gradation value shown in Table 703-3, the upper specification is equal to the maximum gradation value plus the allowable deviation, and the lower specification is equal to the maximum gradation value minus the allowable deviation.

(2) If the calculated mean value for any tested sieve is less than the minimum gradation value shown in Table 703-3, the upper specification is equal to the minimum gradation

value plus the allowable deviation and the lower specification is equal to the minimum gradation value minus the allowable deviation.

(b) Fractured faces. When aggregate is produced from a gravel source, use the specification limit shown in Subsection 703.05A(f).

(c) Liquid limit. The specification limit is shown in Subsection 703.05A(g).

(d) Plasticity index. The specification limit is shown in Subsection 703.05A(h).

Stabilized imported and in-place aggregate courses will be evaluated under Subsections 106.02 and 106.04.

Reconditioning of the aggregate course for in-place aggregate will be evaluated under Section 303.

Preparation of the surface on which the treated imported aggregate course is placed will be evaluated under Sections 303.

Measurement

304.11 Measure the Section 304 items listed in the bid schedule according to Subsection 109.02 and the following as applicable.

Measure square yard width horizontally to include the top of aggregate width including designed widening. Measure the square yard length along the centerline of the roadway.

Payment

304.12 The accepted quantities will be paid at the contract price per unit of measurement adjusted according to Subsection 106.05 for the Section 304 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

**Table 304-1
Sampling and Testing Requirements**

Material or Product	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Aggregate source quality 703.05(a)	Measured and tested for conformance (106.04 & 105)	LA abrasion (coarse) Sodium sulfate soundness loss (course & fine) Durability index (course & fine) Accelerated weathering	—	AASHTO T 96 AASHTO T 104 AASHTO T 210 WFLHD-DMSO	1 per type & not less than 5 per source of material (1)	Source of material " " "	Yes, when requested " " "	Before using in work " " "

(1) Furnish a minimum of five reports, but not less than one report per rock type for each source. Reports must be dated within 1 year of intended use. Obtain samples representative of aggregates being furnished. Include rock type and sample location on test reports.

**Table 304-1 (continued)
Sampling and Testing Requirements**

Material or Product	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Imported aggregate course								
In-place aggregate course								
Proportioning (304.03)	Measured and tested for conformance (106.04)	Moisture-density	—	AASHTO T 180, method D (minimum of 5 pts)	1 for each mixture or change in material	Processed material before incorporating in work	Yes, when requested	Before using in work
Proportioning (304.03)	Measured and tested for conformance (106.04)	Moisture-density	—	AASHTO T 180, method D (minimum of 5 pts)	3 per road segment	Processed material before incorporating in work	Yes, when requested	Before using in work
Imported Aggregate								
Aggregate (703.05)	Statistical (106.05)	Gradation No. 4 No. 40 No. 200 Other specified sieves	I I I II	AASHTO T 27 & T 11	1 per 1000 tons	Processed aggregate before stabilizing	Yes, when requested	4 hours
Stabilized Aggregate								
Mixture (304)	Measured and tested for conformance (106.04)	In-place density & moisture content	—	AASHTO T 310 or other approved procedures	1 per 500 tons or 3000 yd ²	Compacted material	—	4 hours

Sections 305 to 309 and sections 400 to 416 have been intentionally omitted.

Section 417.— MINOR COLD ASPHALT MIX

Description

417.01 This work consists of furnishing and placing one or more courses of cold asphalt mix. This work also consists of furnishing and placing cold asphalt mix as a patching material for temporary roadway maintenance.

Material

417.02 Conform to the following Subsection:

Cold asphalt mix	702.10
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Construction Requirements

417.03 Composition of Mix (Job-Mix Formula). Submit the strength, quality, and gradation specifications for the cold asphalt mix. Include copies of laboratory test reports that demonstrate the properties of the aggregates, asphalt binder, additives, and mix meet Federal or State agency specifications.

417.04 Surface Preparation. Clean the existing surface of all loose material, dirt or other deleterious substances by approved methods.

417.05 Placing. Place the mix with appropriate equipment to produce a uniform surface. For roadway paving, do not place lifts thicker than 4 inches. In areas where mechanical spreading and finishing is impractical, spread and finish each course by hand raking, screeding, or by other approved methods. Construct a surface that is uniform in texture and cross-section. Construct joints or tapers as required.

417.06 Compacting.

(a) **Roadway paving.** Compact by rolling with a steel-wheeled roller weighing at least 8 tons.

(b) **Non-roadway paving and patching.** Compact by rolling with a hand-operated roller weighing at least 300 pounds or with a small power roller.

Compact areas that are not accessible to rollers by other approved methods.

417.07 Acceptance. Minor cold asphalt mix will be evaluated under Subsections 106.02 and 106.03.

Minor cold asphalt mix construction work will be evaluated under Subsections 106.02 and 106.04.

Measurement

417.08 Do not measure Section 417 items for payment.

Division 500 and Sections 551 to 556 has been intentionally omitted

Section 557.— TIMBER STRUCTURES

Description

557.01 This work consists of furnishing and placing structural timber on an existing wooden bridge deck. It also includes all required yard lumber, hardware, and cold asphalt mix for preleveling.

Material

557.02 Conform to the following Section and Subsections:

Hardware	716.02
Untreated structural timber and lumber	716.01
Cold mix asphalt	702.10

Construction Requirements

557.03 General.

Furnish structural lumber and timber of the required stress grade.

Clear the ground under and in the vicinity of all stored material of stacks of weeds, rubbish, or other objectionable material. Place the bottom layer of material at least 8 inches above the ground level. Provide sufficient support to prevent sagging.

Open-stack untreated material to shed water. Stack material in layers on spacers (stickers) that extend across the full width of the stack to allow for free air circulation. Align all stickers vertically and space them at regular intervals.

Close-stack treated material to shed water.

Protect material from the weather. If covered, use sheet material such as water-resistant paper or opaque polyethylene film. Do not cover with impervious membranes such as polyethylene film during dry weather. Slit individual wrappings full length or puncture on the lower side to permit drainage of water.

Use slings or other devices to protect corners of heavy construction timbers and banded packages of lighter construction timber.

Cut and form all lumber and construction timber so all joints will have even bearing over the entire contact surface. Do not use shims in making joints. Construct all joints to be closed. Drive nails and spikes to set the heads flush with the wood surface.

Contract Requirements

Project: MT OMAD 18(41), Minuteman Missile Base Roads

Use the same end, face, and edge of the timber member for all layout dimensions. Bore all holes from mating faces.

Prior to placing timber on the existing bridge deck, remove existing wearing surface, including pavement, gravel and all other debris from the existing deck, according to Sections 622 and 623. Furnish and place cold asphalt mix as a preleveling course per Section 417.

557.04 Reserved.

557.05 Holes for Bolts, Dowels, Rods, and Lag Screws. Bore holes for round drift pins and dowels to the same diameter as the dowel or pin. Bore holes for square drift pins and dowels to a diameter equal to the side dimension of the pin or dowel.

Bore holes for galvanized bolts to 1/8 inch larger than the diameter of the bolt.

Bore holes for lag screws according to Subsection 7.3.1. of the *AITC Timber Construction Manual*.

557.06 Bolts and Washers. Galvanize hardware and fasteners including nails, spikes, bolts, washers, and timber connectors. Do not galvanize malleable iron or cast-iron hardware or fasteners.

Use washers under all bolt heads and nuts in contact with wood. Use malleable iron washers with a diameter approximately three times the bolt diameter. Use cast-iron washers when the timber is in contact with the ground. Use square washers only when indicated on the contract plans.

Cut off excess bolt lengths of more than an inch. After final tightening, check or burr all bolts with a pointing tool to prevent loosening of the nuts.

557.07 Countersinking. Countersink nuts and bolt heads where required by the contract. Paint recesses formed for countersinking, except in railings, with an approved preservative. After bolts or screws are in place, fill the holes with hot pitch or other approved filler.

557.08 Reserved.

557.09 Reserved.

557.10 Reserved.

557.11 Reserved.

557.12 Reserved.

557.13 Plank Floors. Use plank that is surfaced on four sides (S4S).

Lay the running planks heart side down with tight joints. Lay the running planks parallel to the centerline of roadway as required. Securely fasten each floor piece to the lower layer. Bevel the ends of the running plank members at each end of the structure.

557.14 Reserved.

557.15 Reserved.

557.16 Reserved.

557.17 Reserved.

557.18 Reserved.

557.19 Acceptance. Material for timber structures will be evaluated under Subsections 106.02 and 106.03. Furnish a production certification with each shipment of structural timber and lumber.

Construction of timber structures will be evaluated under Subsections 106.02 and 106.04.

Measurement

557.20 Measure the Section 557 items listed in the bid schedule according to Subsection 109.02 and the following as applicable.

Measure untreated structural timber and lumber by the thousand feet board measure (MFBM) in the structure.

Compute the quantities from nominal dimensions.

Measure removal and disposal of existing wearing surface, including pavement, gravel and all other debris, from the existing bridge deck under Sections 622 and 623.

Do not measure furnishing and placing cold asphalt mix.

Payment

557.21 The accepted quantities will be paid at the contract price per unit of measurement for the Section 557 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

Sections 558 to 566 and Sections 601 to 621 have been intentionally omitted

Section 622.— RENTAL EQUIPMENT

Description

622.01 This work consists of furnishing and operating equipment for the construction work as ordered by the CO and listed below. Work under this Section does not include equipment time used to perform work provided for under any other pay item shown in the bid schedule. The work anticipated under this Section includes:

- (a) Removal and disposal of unsuitable or excess material at culverts and bridge ends.
- (b) Removal and disposal of unsuitable or excess material from the cattle guard on E-09 access road.
- (c) Compaction of aggregate backfill material used in soft or unstable areas according to Section 303.
- (d) Removal and disposal of existing wearing surface, including pavement, gravel and all other debris, from the existing deck on the Road O-11 bridge.
- (e) Moving and compacting existing roadway material on road O-11 to match adjusted bridge wearing surface grade.

Construction Requirements

622.02 Rental Equipment. Furnish and operate the following equipment;

Number of

<u>Units</u>	<u>Type of Equipment</u>
1	Roller
1	Motor grader, 12 foot minimum blade
1	Backhoe loader, 6 cubic foot minimum rated capacity bucket, 24 inch width
1	Dump truck, 12 cubic yard minimum capacity

Submit the model number and serial number for each piece of equipment before use. Make equipment available for inspection and approval before use.

Furnish and operate equipment with such auxiliary attachments, oilers, etc., as are usually needed for efficient operation of the equipment. Keep the equipment in good repair and capable of operating 90 percent of the working time.

Contract Requirements

Project: MT OMAD 18(41), Minuteman Missile Base Roads

Obtain approval of the length of workday and workweek before beginning work. Keep daily records of the number of unit-hours of operation. Submit the records along with certified copies of the payroll.

622.03 Acceptance. Rental equipment work will be evaluated under Subsection 106.02.

Measurement

622.04 Measure the Section 622 items listed in the bid schedule according to Subsection 109.02 and the following as applicable.

Round portions of an hour up to the next half hour. Measure time in excess of 40 hours per week at the same rate as the first 40 hours.

Measure time for moving equipment between project work sites. Do not measure nonoperable equipment or equipment dependent upon another piece of nonoperable equipment.

Payment

622.05 The accepted quantities will be paid at the contract price per unit of measurement for the Section 622 pay item listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

Sections 623.— GENERAL LABOR

Description

623.01 Delete the text of this Subsection and substitute the following:

This work consists of furnishing workers and hand tools for the work listed in Subsection 622.01.

Construction Requirements

623.02 Workers and Equipment. Furnish competent workers and appropriate hand tools for the work.

Obtain approval of the length of workday and workweek before beginning work. Keep daily records of the number of hours worked. Submit the records along with certified copies of the payroll.

623.03 Acceptance. General labor work will be evaluated under Subsection 106.02.

Measurement

623.04 Do not measure Section 623 items for payment.

Section 624 to 634 have been intentionally omitted.

Section 635.— TEMPORARY TRAFFIC CONTROL

Description

635.01 This work consists of furnishing, maintaining, relocating, and removing temporary traffic control devices and services as ordered for the control and protection of public traffic through the project.

Advance warning arrow panel, barricade, and warning light types are designated as shown in the MUTCD.

Material

635.02 Conform to the MUTCD and the following Sections and Subsections:

Hardware	718.10
Retroreflective sheeting	718.01
Signposts	718.08
Temporary traffic control devices	718.22
Portable signs	718.25
Plywood panels	718.03
Steel panels	718.04
Aluminum panels	718.05
Letters, numerals, arrows, symbols, and borders	718.11

Construction Requirements

635.03 General. Install and maintain temporary traffic control devices adjacent to and within the project as required by the traffic control plan, Section 156, and the MUTCD. Install and maintain traffic control devices as follows:

- (a) Furnish and install traffic control devices before the start of construction operations.
- (b) Install only those traffic control devices needed for each stage or phase.
- (c) Relocate temporary traffic control devices as necessary.
- (d) Remove devices that no longer apply to the existing conditions.
- (e) Immediately replace any device that is lost, stolen, destroyed, or inoperative.

- (f) Keep temporary traffic control devices clean.
- (g) Furnish and maintain traffic control devices that meet the "acceptable" standard described in *Quality Standards for Work Zone Traffic Control Devices* published by ATSSA. Amend the ATSSA standards as follows:
 - (1) Repair or remove and replace “marginal” devices within 48 hours; and
 - (2) Repair or remove and replace “unacceptable” devices immediately.
- (h) Remove all temporary traffic control devices upon contract completion or when approved.
- (i) Furnish temporary traffic control devices that meet the NCHRP Report 350, *Recommended Procedures for the Safety Performance Evaluation of Highway Features*, for crashworthiness standards as applicable.

635.04 Reserved

635.05 Barricades. Perform the work described under MUTCD Part 6. Use type III, VII, VIII, or IX retroreflective sheeting.

635.06 Cones and Tubular Markers. Perform the work described under MUTCD Part 6. Use 28-inch cones or tubular markers. Use type III, or VI retroreflective sheeting.

635.07 Construction Signs. Use type III, VII, VIII, or IX retroreflective sheeting. For roll-up signs, use type VI retroreflective sheeting. Remove or completely cover all unnecessary signs with metal, plywood, or other acceptable material.

Use crashworthy posts within the traversable area adjacent to traffic. Sign locations may be changed to fit field conditions as approved by the CO. Install posts plumb.

635.08 Reserved.

635.09 Flaggers. Use flaggers certified by the American Traffic Safety Services Association, the National Safety Council, the International Municipal Signal Association, a state agency, or other acceptable organization. Perform the work described under MUTCD Part 6. Use type III, VII, VIII, or IX retroreflective sheeting on flagger paddles. Do not use flags.

635.10 – 635.14 Reserved.

635.15 Warning Lights. Perform the work described under MUTCD Part 6. When type C, steady-burn, warning lights are installed on barricades or drums and used in a series for delineation, use type A, flashing, warning lights on the first 2 barricades or drums in the series. Mount batteries for type B warning lights a maximum of 12 inches from ground or roadway surface as measured to top of the battery casing.

635.16 – 635.24 Reserved.

635.25 Acceptance. Material (including signs, barricades, cones, and tubular markers) for temporary traffic control devices will be evaluated under Subsections 106.02 and 106.03. Placement of temporary traffic control devices will be evaluated under Subsections 106.02 and 106.04.

Temporary traffic control services will be evaluated under Subsection 106.02.

Measurement

635.26 Measure the Section 635 items listed in the bid schedule according to Subsection 109.02 and the following as applicable when ordered by the CO and installed.

Measure flaggers, for each hour a person is actually flagging. Round portions of an hour up to the half hour. Measure time in excess of 40 hours per week at the same rate as the first 40 hours.

Signs used to delineate passing zones will not be measured.

Payment

635.27 The accepted quantities will be paid at the contract price per unit of measurement for the Section 635 pay items in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

Progress payments for temporary traffic control devices will be made as follows:

- (a) 50 percent of the unit bid price will be paid upon installation.
- (b) An additional 25 percent of the unit bid price will be paid following completion of 50 percent of the contract amount.
- (c) Payment of the remaining portion of the unit bid price will be paid when the temporary traffic control devices are removed from the project.

Progress payments for items paid for by the hour will be paid at 100 percent of the unit bid price when ordered by the CO and furnished.

Sections 636 to 637 have been intentionally omitted

Section 701 has been intentionally omitted.

Section 702.— ASPHALT MATERIAL

702.01 - 702.09 Reserved.

702.10 Cold Asphalt Mix. Conform to ASTM D 4215.

Do not use an aggregate asphalt mix that strips. For patching mixes, use an asphalt grade and mix that remains pliable and workable at 14 °F.

Section 703.— AGGREGATE

703.05 Surface Course Aggregate. Furnish hard, durable particles or fragments of crushed stone, crushed slag, or crushed gravel meeting the appropriate gradation and conforming to the following:

(a) Gradation	Table 703-3
(b) Los Angeles abrasion, AASHTO T 96	35% max.
(c) Sodium sulfate soundness loss (5 cycles), AASHTO T 104 (coarse and fine)	12% max.
(d) Durability Index, AASHTO T 210 (coarse and fine)	35 min.
(e) Dimethyl Sulfoxide (DMSO), WFLHD Test for Accelerated Weathering of Aggregate by use of Dimethyl Sulfoxide	12% max.
(f) Fractured faces, ASTM D 5821	50% min.
(g) Liquid limit, AASHTO T 89	35 max.
(h) Plasticity index, AASHTO T 90	10 ± 3

Furnish a material that is free from organic matter and lumps or balls of clay. Do not use material that breaks up when alternately frozen and thawed or wetted and dried.

Obtain the aggregate gradation by crushing, screening, and blending processes as necessary. Fine aggregate, material passing the No. 4 sieve, shall consist of natural or crushed sand and fine mineral particles.

Do not furnish material that contains asbestos fibers.

703.05A Imported surface course aggregate. Furnish hard, durable particles or fragments of crushed stone, crushed slag, or crushed gravel meeting the appropriate gradation and conforming to the following:

(a) Gradation	Table 703-3
(b) Los Angeles abrasion, AASHTO T 96	35% max.

- (c) Sodium sulfate soundness loss (5 cycles), AASHTO T 104 (coarse and fine) 12% max.
- (d) Durability Index, AASHTO T 210 (coarse and fine) 35 min.
- (e) Dimethyl Sulfoxide (DMSO), WFLHD Test for Accelerated Weathering of Aggregate by use of Dimethyl Sulfoxide 12% max.
- (f) Fractured faces, ASTM D 5821 50% min.
- (g) Liquid limit, AASHTO T 89 35 max.
- (h) Plasticity index, AASHTO T 90 7 ± 3

Furnish a material that is free from organic matter and lumps or balls of clay. Do not use material that breaks up when alternately frozen and thawed or wetted and dried.

Obtain the aggregate gradation by crushing, screening, and blending processes as necessary. Fine aggregate, material passing the No. 4 sieve, shall consist of natural or crushed sand and fine mineral particles.

Do not furnish material that contains asbestos fibers.

**Table 703 – 3
Target Value Ranges for
Surface Course Gradations**

Sieve Size	Percent by Mass Passing Designated Sieve (AASHTO T 27 and T 11)
	Grading Designation
	H
1 inch	100
1/2 inch	70 - 80 (5)
No. 4	40 - 50 (7)
No. 10	25 - 40 (6)
No. 40	15 - 25 (5)
No. 200	8 - 14 (4)

Note: Statistical acceptance procedures do not apply to sieve sizes that require 100% passing. Allowable deviations (\pm) from the target values are shown in ().

703.06 - 703.13 Reserved.

Sections 704 to 712 have been intentionally omitted.

Section 713.— ROADSIDE IMPROVEMENT MATERIAL

713.01 – 713.04 Reserved.

713.05 Mulch

(a) **Straw.** Furnish certified weed free straw from oats, wheat, rye, or other grain crops that is free from mold or other objectionable material. Furnish straw in an air-dry condition suitable for placing with mulch blower equipment.

713.06-713.12 Reserved

713.13 Erosion Control Straw Bales, Wattles, Logs, and Rolls.

(a) **Excelsior fiber wattles, logs or rolls.** Furnish wattles, logs, or rolls of curled excelsior fiber rolled into a cylindrical shape and encased in a seamless photodegradable tubular netting. Conform to the following:

- | | |
|--------------|------------------------|
| (1) Diameter | 12 inches min. |
| (2) Mass | 3 pounds per foot min. |

(b) **Straw wattles, logs or rolls.** Furnish straw wattles that are manufactured from weed free straw and wrapped in a tubular photodegradable plastic netting made from 85% high density polyethylene, 14% ethyl vinyl acetate and 1% color for UV inhibition. Conform to the following:

- | | |
|------------------------------|--------------------------------|
| (1) Diameter | 9 inches min. |
| (2) Netting strand thickness | 0.030 inches |
| (3) Netting knot thickness | 0.055 inches |
| (4) Mass of netting | 0.315 to 0.385 ounces per foot |

713.14 – 713.18 Reserved.

Sections 714 to 715 have been intentionally omitted.

Section 716.— MATERIAL FOR TIMBER STRUCTURES

716.01 Untreated Structural Timber and Lumber. Conform to AASHTO M 168. Furnish an inspection certification from an agency accredited by the American Lumber Standards Committee for the species and grade. Mark all pieces with the inspection service, grade designation, species, and inspector identity.

Season and dry all structural timber and lumber before fabrication. Do not use material that is twisted, curved, or otherwise distorted.

Do not use boxed-heart pieces of Douglas fir or redwood in outside stringers, floor beams, caps, posts, sills, or rail posts. Boxed-heart pieces are defined as timber so sawed that, at any point in the length of a sawed piece, the pith lies entirely inside the four faces.

716.02 Hardware. Machine bolts, drift bolts and dowels may be medium steel. Fabricate washers from gray iron or malleable iron castings unless structural washers are specified.

Use square-headed bolts and nuts. Use a standard commercial type of cut or round nail. Use cut, round, or boat spikes as specified.

Galvanize all hardware according to AASHTO M 232 or cadmium plate all hardware according to ASTM B 766, class 12, type III.

Use ring or shear-plate timber connectors conforming to AASHTO *Standard Specifications for Highway Bridges* Division II, article 16.2.6, Timber Connectors.

716.03 Reserved.

716.04 Reserved.

Section 717 has been intentionally omitted.

Section 718.— TRAFFIC SIGNING AND MARKING MATERIAL**718.01 Retroreflective Sheeting.** Conform to ASTM D 4956.

Conform to ASTM D 4956 Supplemental Requirement S1, Fungus Resistance, if specified. For reboundable retroreflective sheeting, conform to ASTM D 4956 including Supplemental Requirement S2, Reboundable Sheeting Requirements.

When an adhesive is used, use ASTM D 4956, backing class 1, 2, or 3.

718.02 Reserved.

718.03 Plywood Panels. Furnish exterior type B-B high-density overlay plywood or better conforming to NIST specification PS-1 for construction and industrial plywood. Use 1/2-inch thick plywood for sign panels with a facial area 4 square feet or less and the horizontal dimension no greater than the vertical dimension. Use 3/4-inch thick plywood for larger panels.

Abrade, clean, and degrease the face of the plywood panel according to methods recommended by the manufacturer of the retroreflective sheeting. Treat the edges of the plywood panel with an approved edge sealant.

718.04 Steel Panels. Furnish 0.079-inch continuous coat galvanized sheet steel blanks conforming to ASTM A 653. Mill phosphatize the zinc coating (designation G 90) to a thickness of 0.0035 ± 0.00175 ounces per square foot of surface area.

Furnish panels with a substantially plane surface. Do not use twisted or buckled panels. Clean, degrease, or otherwise prepare the panels according to methods recommended by the sheeting manufacturer.

718.05 Aluminum Panels. Conform to ASTM B 209, alloy 6061-T6 or 5052-H38.

Fabricate all temporary panels and those permanent panels that are 30 by 30 inches or smaller from 0.080-inch thick aluminum sheets. Fabricate larger permanent panels from 0.125-inch thick aluminum sheets.

The blanks shall be free from laminations, blisters, open seams, pits, holes, or other defects that may affect their appearance or use. The thickness shall be uniform and the blank commercially flat. Perform shearing, cutting, and punching before preparing the blanks for application of reflective material.

Clean, degrease, and chromate the blanks or otherwise properly prepare the panels according to methods recommended by the sheeting manufacturer.

718.06 Reserved.

718.07 Reserved.

718.08 Signposts. Furnish wood posts from dry no. 1 grade Douglas fir, southern or Ponderosa pine, hemlock, spruce, or western larch conforming to AASHTO M 168. Treat the posts with water-borne preservative ACA, ACZA, or CCA according to AWPA Standard C14 except the minimum preservative retention is 0.40 pounds per cubic foot.

718.09 Reserved.

718.10 Hardware. For lag screws, washers, clip angles, wood screws, shear plates, U-bolts, clamps, bolts, nuts, and other fasteners, use galvanized steel or aluminum alloy.

For high-strength steel bolts, nuts, and washers, conform to ASTM A307. Galvanize steel hardware according to AASHTO M 232.

For aluminum alloy bolts, nuts, and washers, conform to American standard heavy hexagon ANSI B18.2. For threads, conform to American standard coarse series, class 2 fit, ANSI specification B1.1.

Furnish oversize bolt heads and oversize neoprene or nylon washers for plastic sign panels.

718.11 Letters, Numerals, Arrows, Symbols, and Borders. Colors will be specified in the contract and shall conform to Subsection 718.01.

Form letters, numerals, and other units to provide a continuous stroke width with smooth edges. Make the surface flat and free of warp, blisters, wrinkles, burrs, and splinters. Conform to one of the following:

(a) **Type L-1 (screen process).** Apply letters, numerals, arrows, symbols, and borders on the retroreflective sheeting or opaque background of the sign by direct or reverse screen process. Apply messages and borders of a color darker than the background to the paint or the retroreflective sheeting by direct process. Produce messages and borders of a color lighter than sign background by the reverse screen process.

Use opaque or transparent colors, inks, and paints in the screen process of the type and quality recommended by the retroreflective sheeting manufacturer.

Perform the screening in a manner that results in a uniform color and tone, with sharply-defined edges of legends and borders, and without blemishes on the sign background that will affect intended use.

Air dry or bake the signs after screening according to manufacturer's recommendations to provide a smooth hard finish. Any signs with blisters or other blemishes will be rejected.

(b) Type L-3 (direct applied characters). Cut letters, numerals, symbols, borders, and other features of the sign message from the type and color of the retroreflective sheeting specified, and apply to the sign background's retroreflective sheeting according to the retroreflective sheeting manufacturer's instructions. For the retroreflective sheeting minimum coefficient of retroreflection (R_A), conform to AASHTO M 268.

718.12 – 718.21 Reserved.

718.22 Temporary Traffic Control Devices. Use suitable commercial grade material for the fabrication of the temporary traffic control devices. Construct the devices from material capable of withstanding anticipated weather, traffic conditions, and suitable for the intended use. Do not use units used on other projects without approval.

718.23 – 718.24 Reserved.

718.25 Portable Signs. Each portable sign consists of a base, standard or framework, and a sign panel.

Sign panels for portable signs shall conform to the applicable requirements of Section 633 and MUTCD. Use plywood, aluminum, steel, plastic, or fabric for sign panels.

Furnish sign standards or framework capable of supporting a sign panel 5 foot by 5 feet maximum dimension in an upright position with the center of the sign panel a minimum of 5 foot above the roadway surface.

Sections 719 to 724 have been intentionally omitted.

Section 725.— MISCELLANEOUS MATERIAL

725.01 Water. Furnish water free of substances detrimental to the work.

725.02 Calcium Chloride Flakes/Pellets. Conform to AASHTO M 144, Grade 3, Class A or Class B with the following exceptions:

- | | |
|---|--------------|
| (1) Calcium Hydroxide (Ca(OH)_2) | 0.3% maximum |
| (2) Total alkaline chlorides as NaCl | 5% maximum |

725.03 Lime. Conform to AASHTO M 216 for hydrated lime.

H-1

PERMITS

This project is below the threshold for federal regulatory permits.

Permits

Project: MT OMAD 18(41), Minuteman Missile Base Roads

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**STORMWATER, EROSION CONTROL,
AND SEDIMENT CONTROL
BEST MANAGEMENT PRACTICES**

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**STORMWATER, EROSION CONTROL,
AND SEDIMENT CONTROL
BEST MANAGEMENT PRACTICES**

A. **Site Description**

1. **Project Name:**

Minuteman Missile Base Roads, MT OMAD 18(41)

2. **Project Address:**

The project is located in the Malmstrom Air Force Base maintenance area in Fergus and Wheatland counties, Montana. Road locations are as follows:

O-11 (Horse Ranch Road) – Intersection of State Route 191 and B142E north on B142E to the intersection of B142E and 112. North on 112 terminating at LF-O-11

E-11 (Bridge Road) – Junction of S236 and B1 north on S236 terminating at LF E-11

E-2 (Stafford Ferry Road) – Route B101 at Winifred, Montana; east approximately 1.0 mile then north approximately 0.9 miles terminating at the intersection of B101 and B102.

L-5 (Living Springs Road) – Beginning at the intersection of S297 and 120, south on 120 then east on 150 to LF L-05.

N-9 (Corbley Butte Road) – Beginning at the junction of State Route 87 and B226, north on B226 to LF N-09.

E-9 (Salt Creek Road) – Beginning at the intersection of C2 and E4, north on E4 to LF E-09.

M-6 (Crystal Lake Road) – Route B330 east out of Moore, MT to 323 south to B373 east to E321 east ending at LF M-06.

L-2 (Sipple Road) – from the intersection of B306 and B330 south on E306 to the intersection of 301. East on 301 to the intersection of C305E. South on C305E terminating at LF-02.

3. **Owner Name and Address:**

341st Space Wing
21 77th Street North
Bldg. 500, Room 150A
Malmstrom AFB, MT 59402-7538

Lead Agency:
Federal Highway Administration (FHWA)
610 East Fifth Street
Vancouver, WA 98661-3893

The FHWA is preparing the design and will administer the construction contract. The Air Force will maintain the roads after regravelling is completed.

4. **Project Description and Starting Date:**

This project regravels or stabilizes 8 County road segments within a 50-mile radius to the east of Great Falls, Montana. Construction will likely begin in June 2008 and will likely be completed in September 2009.

5. **Name of the nearest surface water body and distance:**

County	Road Number	Road Name	Water Source
Fergus	0-11	Horse Ranch Road	Armells Creek, Coulee Creek
Fergus	E-11	PN Bridge Road	Judith River
Fergus	E-02	Stafford Ferry Road	Dog Creek, Rose Creek, Cutbank Creek
Wheatland	L-05	Living Springs Road	Timber Creek, Careless Creeek
Fergus	N-09	Corbley Butte Road	Spring Creek
Fergus	E-09	Salt Creek Road	Box Elder Creek
Fergus	M-06	Crystal Lake Road	Big Rock Creek, Beaver Creek
Fergus	L-02	Sipple Road	Little Trout Creek

B. **Controls**

1. **Temporary Stabilization Practices:**

- | | |
|---|--|
| <input type="checkbox"/> Temporary seeding | <input type="checkbox"/> Mulching |
| <input type="checkbox"/> Erosion control blankets | <input checked="" type="checkbox"/> Sediment wattles |
| <input type="checkbox"/> Temporary channel diversion device | <input type="checkbox"/> Temporary sediment basins |
| <input type="checkbox"/> Brush barriers | <input type="checkbox"/> Silt fences |

Sediment wattle check dams will be installed at crossings where water is present during gravel application.

Sediment wattle check dams will be installed above culverts where water is present during road cutbacks.

2. Permanent Stabilization Practices:

<input type="checkbox"/>	Permanent seeding	<input type="checkbox"/>	Sod stabilization	<input type="checkbox"/>	Check dams
<input type="checkbox"/>	Vegetative buffer strips	<input type="checkbox"/>	Grassed waterways	<input type="checkbox"/>	Erosion blankets
<input checked="" type="checkbox"/>	Drainage swales	<input type="checkbox"/>	Earth dikes	<input type="checkbox"/>	Pipe slope drain
<input type="checkbox"/>	Level spreader	<input type="checkbox"/>	Subsurface drain	<input type="checkbox"/>	Sediment trap
<input type="checkbox"/>	Drain inlet protection	<input type="checkbox"/>	Sediment basin/pond	<input type="checkbox"/>	Rock outlet protection
<input type="checkbox"/>	Terraced slopes	<input type="checkbox"/>	Retaining walls	<input type="checkbox"/>	Riprap-lined ditch

3. Storm Waster Management Controls:

- Wet pond(s) or man-made wetland(s)
- Infiltration trench(es) or basin(s)
- Dry pond(s)
- Flow attenuation by use of vegetation waterways and natural depressions (most highway projects)

4. Narrative Sequence of Major Activities:

1. Install erosion control and sediment barrier measures at crossings.
2. Apply gravel to existing road surfaces.
3. Remove erosion control and sediment barrier measures.

5. Waste Disposal:

(List disposal methods for construction, hazardous, and sanitary wastes)

No construction waste will be generated. All erosion control and sediment barrier measures will be removed from the site for reuse on other projects, or properly disposed of in a sanitary landfill. All hazardous waste and sanitary wastes will be removed from the project site, and treated as required by State and Federal laws.

6. Offsite Vehicle Tracking:

No offsite work is anticipated during this project.

C. Maintenance/Inspection Procedures

The FHWA will have a full-time Project Engineer on the project. The Project Engineer will conduct routine and weather-related inspections to ensure compliance with the proposed erosion control plan.

D. Spill Prevention and Materials Storage Practices

1. Materials Inventory:

(check those materials which will be present at the site during construction)

<input type="checkbox"/>	Concrete	<input type="checkbox"/>	Detergents	<input type="checkbox"/>	Fertilizers
<input type="checkbox"/>	Pesticides	<input type="checkbox"/>	Paints	<input checked="" type="checkbox"/>	Fuel
<input type="checkbox"/>	Solvents	<input type="checkbox"/>	Metal studs	<input type="checkbox"/>	Lumber
<input type="checkbox"/>	Masonry blocks	<input type="checkbox"/>	Tar	<input type="checkbox"/>	Roofing shingles
<input checked="" type="checkbox"/>	Petroleum-based products (diesel, gasoline, engine oil)				

List other material to be used or stored on-site: Aggregate surface course, calcium chloride flake, hydrated lime, geotextiles, signs (wood posts and metal), cones, and barricades.

2. The following product specific storage practices will be followed on-site:

Petroleum: Stationary diesel and gasoline tanks will have containment berms lined with an impervious membrane.

Fertilizers and Pesticides: No long-term storage at the project site.

Hazardous Materials: Labeled and stored in proper containers at least 33 meters (100 feet) from surface water streams.

3. In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup:

A Hazardous Spill Plan will be required prior to starting construction, stating what actions will be taken in case of a spill. This plan will also incorporate preventive measures to be implemented.

4. Attach maps of the site and indicate the location of erosion control practices:

Plan sheets are incorporated by reference. The vicinity and locations are shown on sheets K.1 – K.10; erosion control measures are shown on sheets O.1 – O.2.

FIRE PROTECTION AND SUPPRESSION PLAN

There are no special requirements for fire protection and suppression.

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