



US Army Corps of Engineers

Kansas City District

Building Strong

W912DQ23B1002

**KANOPOLIS DAM & RESERVOIR
REPAINT SERVICE BRIDGE
SUPERSTRUCTURE
SMOKY HILL RIVER, KANSAS**

AS ADVERTISED

**CONSTRUCTION SPECIFICATIONS
AND SOLICITATION**

NOVEMBER 2022

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DEPARTMENT OF THE ARMY
Kansas City District, Corps of Engineers
647 Federal Building
Kansas City, Missouri 64106

SPECIFICATIONS FOR CONSTRUCTION OF

**KANOPOLIS DAM & RESERVOIR
REPAINT SERVICE BRIDGE SUPERSTRUCTURE
SMOKY HILL RIVER, KANSAS**

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SOLICITATION, OFFER, AND AWARD <i>(Construction, Alteration, or Repair)</i>	1. SOLICITATION NO. W912DQ23B1002	2. TYPE OF SOLICITATION <input checked="" type="checkbox"/> SEALED BID (IFB) <input type="checkbox"/> NEGOTIATED (RFP)	3. DATE ISSUED 22-Nov-2022	PAGE OF PAGES 1 OF 41
	IMPORTANT - The "offer" section on the reverse must be fully completed by offeror.			

4. CONTRACT NO.	5. REQUISITION/PURCHASE REQUEST NO.	6. PROJECT NO.
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7. ISSUED BY USACE, KANSAS CITY + FEDERAL BLDG, CT-C + 601 E 12TH ST RM 647 KANSAS CITY MO 64106-2896 TEL: 816-389-3812 FAX: 816-389-2029/2030	CODE W912DQ	8. ADDRESS OFFER TO <i>(If Other Than Item 7)</i> CODE See Item 7 TEL: FAX:
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9. FOR INFORMATION CALL:	A. NAME ERYNN WRIGHT	B. TELEPHONE NO. <i>(Include area code) (NO COLLECT CALLS)</i> (816) 389-2131
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SOLICITATION

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

10. THE GOVERNMENT REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS *(Title, identifying no., date):*

KANOPOLIS DAM & RESERVOIR, REPAINT SERVICE BRIDGE SUPERSTRUCTURE-Contractor shall provide all labor, equipment and material for bridge painting at Kanopolis Lake in accordance with the Scope of Work. The work includes complete removal of an existing lead based paint system on the steel superstructure of the bridge, the bearings and handrails, expansion joint sliding plates, the cleaning and preparation of the metal surfaces, bridge inspection by a qualified individual(s) prior to paint application, the furnishing, application and protection of the paint coatings, the protection from paint of all surfaces not to be painted, and repainting the bridge with a tested and approved paint system.

The existing paint system is known to contain lead.

This requirement is a 100% total Small Business set-aside that will result in one firm-fixed-price award. The NAICS code for this requirement is 238320, size standard \$16.5 Million. In accordance with FAR 36.204 and DFARS 236.204 the estimated magnitude of this project is between \$500,000 and \$1,000,000.

11. The Contractor shall begin performance within 10 calendar days and complete it within 180 calendar days after receiving award, notice to proceed. This performance period is mandatory, negotiable. (See FAR 52.211-10 _____.)

12 A. 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 1 copies to perform the work required are due at the place specified in Item 8 by 02:00 PM (hour) local time 05 Jan 2023 (date). 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 90 calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.

SOLICITATION, OFFER, AND AWARD (Continued)

(Construction, Alteration, or Repair)

OFFER (Must be fully completed by offeror)

14. NAME AND ADDRESS OF OFFEROR <i>(Include ZIP Code)</i>	15. TELEPHONE NO. <i>(Include area code)</i>
CODE FACILITY CODE	16. REMITTANCE ADDRESS <i>(Include only if different than Item 14)</i> See Item 14

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 offer is accepted by the Government in writing within _____ calendar days after the date offers are due. *(Insert any number equal to or greater than the minimum requirements stated in Item 13D. Failure to insert any number means the offeror accepts the minimum in Item 13D.)*

AMOUNTS	SEE SCHEDULE OF PRICES
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18. The offeror agrees to furnish any required performance and payment bonds.

19. ACKNOWLEDGMENT OF AMENDMENTS

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

AMENDMENT NO.									
DATE									

20A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER <i>(Type or print)</i>	20B. SIGNATURE	20C. OFFER DATE
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AWARD (To be completed by Government)

21. ITEMS ACCEPTED:

22. AMOUNT	23. ACCOUNTING AND APPROPRIATION DATA
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24. SUBMIT INVOICES TO ADDRESS SHOWN IN <i>(4 copies unless otherwise specified)</i>	ITEM	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)
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26. ADMINISTERED BY CODE	27. PAYMENT WILL BE MADE BY: CODE
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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, requisitions 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 or incorporated by reference in or attached to this contract.	<input 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 commutes 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>	
30B. SIGNATURE	30C. DATE	TEL: EMAIL:
		31B. UNITED STATES OF AMERICA BY
		31C. AWARD DATE

Section 00 10 00 - Solicitation

CAUTION PAGE

BEFORE SIGNING AND EMAILING YOUR BID, please take note of the following, as failure to perform any one of these actions may cause your bid to be rejected.

1. AMENDMENTS: Have you acknowledged receipt of ALL amendments? If in doubt as to the number of amendments issued, please contact our office.
2. AMENDED BID PAGES: If any of the amendments furnished amended bid pages, the amended bid pages must be used in submitting your bid.
3. BID GUARANTEE: Sufficient bid guarantees should be submitted using the latest version of Standard Form (SF) 24 and must be furnished with your bid, if your bid exceeds \$150,000.
4. MISTAKE IN BID: Have you reviewed your bid prices for possible errors in calculations or work left out?
5. FACSIMILE BIDS AND MODIFICATIONS: Will not be considered. Facsimile withdrawals will be considered.
6. BUY AMERICAN ACT: All bidders are cautioned that, prior Government conduct notwithstanding, the Contractor's selection of a domestic construction material which would require the subsequent selection of a foreign construction material for compatibility is not a justification for waiver of the Buy American Act. It is the Contractor's responsibility to verify, prior to submitting the materials for approval, which each system can be built to meet the contract specifications without the use of foreign construction materials.
7. SUBMISSION OF BIDS AND BID OPENING: Due to the COVID-19 Global Pandemic, the Government is taking precautions to ensure the safety and health of all Contractors and Government employees. Electronic bids are REQUIRED. Mailed and hand-delivered bids are NOT ALLOWED. The Contractor is required to ensure that the bid package is legible and complete. Bid bonds shall be copied to where the seals are legible.

To submit your bid, see Submission Requirements Section of this solicitation. Keep in mind that due to email safeguards and the size of your bid package, emails may not be received immediately by the Government; therefore, make sure to email bid packages as early as possible before the bid opening time specified in the solicitation to ensure there was adequate time to receive bids. It is also strongly recommended to confirm your bid has been received by contacting the government point of contact. If bid packages are not received by the Government recipient by the date and time specified for the bid opening, it may be considered late. Refer to FAR 52.214-7 for how late bid packages are handled.

As another precaution, the conference room will be closed off to the public for viewing, but there will be a conference phone line available for all who are interested in attending the bid opening. The following information will be needed if you would like to call in for the bid opening:

Conference Line Number: (844) 800-2712
Access Code: 199 138 9013
Security Code: 1234

If you have any questions, or cannot gain access to the conference line, contact Contract Specialist at (816) 389-3121.

8. SYSTEM FOR AWARD MANAGEMENT (SAM): In accordance with FAR 52.204-7, by submission of an offer, the offeror acknowledges the requirement that a prospective awardee shall be registered in the SAM database prior to award, during performance and through final payment of any contract resulting from this solicitation. If the offeror does not become registered in the SAM database in the time prescribed by the Contracting Officer, the Contracting Officer will proceed to award to the next otherwise successful registered offeror. Offerors may obtain information on registration and annual confirmation requirements via the SAM database accessed through

<https://www.sam.gov/SAM/>. It is highly encouraged that all prospective offerors start their SAM registration process as soon as possible. SAM.GOV REGISTRATION IS FREE OF CHARGE.

PER FAR 4.1102(a), OFFERORS MUST BE REGISTERED IN THE SAM DATABASE AT THE TIME A BID IS SUBMITTED. AFTER A BID IS SUBMITTED AND AN OFFEROR IS FOUND NOT REGISTERED IN THE SAM DATABASE, THE CONTRACTING OFFICER WILL PROCEED WITH AWARD TO THE NEXT SUCCESSFUL CONTRACTOR.

If you were not previously registered, please go to <https://www.sam.gov/SAM/>. Instructions for new registration are also located at the following link:

https://www.sam.gov/SAM/transcript/Quick_Guide_for_Contract_Registrations.pdf to register.

PLEASE NOTE: OFFERORS ARE REQUIRED TO FILL OUT ALL NECESSARY AND REQUIRED PROVISIONS OR CLAUSES THAT ARE ASSOCIATED WITH THIS CONTRACT. IF YOUR SAM REGISTRATION DOES NOT SHOW COMPLETED FILL-IN PROVISIONS AND CLAUSES THAT ARE ASSOCIATED WITH THIS CONTRACT, THE FILL-IN PROVISIONS AND/OR CLAUSES SHALL BE COMPLETED AND SUBMITTED WITH YOUR BID PACKAGE.

If you have questions about Government procurements in general or need assistance in the preparation of your proposal, a local Procurement Technical Assistance Center (PTAC) may be able to help. The Procurement Technical Assistance Program was authorized by Congress in 1985 in an effort to expand the number of businesses capable of participating in the Government marketplace. To locate a PTAC near you, go to <http://www.aptac-us.org/sam-registration/>. THIS IS A FREE SERVICE BY A NON PROFIT PAID FOR BY THE U.S. GOVERNMENT.

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001	Blast/Paint Bridge Superstructure FFP Includes all pricing related to sandblasting and painting the superstructure per the contract documents and inspection by a qualified bridge inspector. This also includes all mob and demob activities. FOB: Destination PSC CD: Z1LB	1	Job		

NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002	Rivet Replacement FFP Includes all pricing related to the replacement of defective rivets with High Strength bolts, washer, and nuts if the qualified bridge inspector determines that a rivet needs replaced. FOB: Destination	300	Each		

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DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	DODAAC / CAGE
0001	180 dys. ANP	1	KANOPOLIS PROJECT OFC 105 RIVERSIDE DR MARQUETTE KS 67464 FOB: Destination	G5R0750
0002	180 dys. ANP	300	(SAME AS PREVIOUS LOCATION) FOB: Destination	G5R0750

Section 00 21 13 - Instructions to Bidders

SUBMISSION REQUIREMENTS

Email bid packages by the due date and time specified in BLOCK 13 to the following email addresses:

Erynn.N.Wright@usace.army.mil

David.M.Best@usace.army.mil

This IFB will result in one Firm-Fixed-Price contract.

Submit one (1) copy of the following in your bid package:

Bid schedule - complete with your bid amount

Ensure all Amendments are acknowledged

Bid Bonds - required with your submission

Provisions/clauses are filled out that have not been acknowledged in SAM registration

Field Office information filled out- see Section 01 30 00

Ensure Bid is reviewed and signed by a Principal of your company with authority to do so

INQUIRIES/QUESTIONS/PLAN ROOM FOR DRAWINGS

Prospective Bidders shall submit contracting and technical inquiries and questions concerning this solicitation document via Bidder Inquiry in ProjNet at www.projnet.org/projnet.

To submit and review offer inquiry items, Offerors will need to be a current registered user or self-register into the system. To self-register, go to the aforementioned web page and click on Register. Select Agency: USACE, then select Site: Contractor. Complete the required fields and then click the Register button.

If you are registered, enter the Managing Agency: USACE, your email address, and the Bidder Inquiry Key for this solicitation listed below, check the security box, and then click Sign in.

From this page, you may view all bidder inquiries or add a new inquiry.

Bidders will receive an acknowledgement of their questions via email, followed by an answer to their questions after it has been processed by our technical team. ***Please Note: Bidders shall only submit one (1) question per inquiry. All inquiries containing multiple questions shall be rejected***

The Solicitation Number is: W912DQ23B1002

The Bidder Inquiry Key is: PUDQW7-WXIAUW

The Plan Room Key is : I4C4VD-5H77U9

The Bidder Inquiry System will be unavailable for new inquiries after **29 December 2022, at 3 PM** local Kansas City time in order to ensure adequate time is allotted to form an appropriate response to inquiries and amend the solicitation, if necessary.

Bidders are requested to review the specification in its entirety, and review the Bidder Inquiry System for answers to questions prior to submission of a new inquiry.

The telephone number for the Call Center is (833) 389-1097 or (217) 367-3273. Email to: staff@projnet.info.

Offerors are requested to review the specification in its entirety and review all amendments for answers to questions prior to submission of a new inquiry.

CLAUSES INCORPORATED BY REFERENCE

52.204-7	System for Award Management	OCT 2018
52.204-16	Commercial and Government Entity Code Reporting	AUG 2020
52.204-22	Alternative Line Item Proposal	JAN 2017
52.214-3	Amendments To Invitations For Bids	DEC 2016
52.214-4	False Statements In Bids	APR 1984
52.214-5	Submission Of Bids	DEC 2016
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
52.219-4	Notice of Price Evaluation Preference for HUBZone Small Business Concerns	SEP 2021
52.223-4	Recovered Material Certification	MAY 2008
52.232-13	Notice Of Progress Payments	APR 1984

CLAUSES INCORPORATED BY FULL TEXT

52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a **Firm Fixed Price** contract resulting from this solicitation.

(End of provision)

52.222-5 CONSTRUCTION WAGE RATE REQUIREMENTS--SECONDARY SITE OF THE WORK (MAY 2014)

(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, Construction Wage Rate Requirements , 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.

(End of provision)

52.222-22 PREVIOUS CONTRACTS AND COMPLIANCE REPORTS (FEB 1999)

The offeror represents that --

(a) () It has, () has not participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation;

(b) () It has, () has not, filed all required compliance reports; and

(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

(End of provision)

52.222-23 NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY FOR CONSTRUCTION (FEB 1999)

(a) The offeror's attention is called to the Equal Opportunity clause and the Affirmative Action Compliance Requirements for Construction clause of this solicitation.

(b) The goals for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Goals for minority participation for each trade	Goals for female participation for each trade
1.5%	6.9%

These goals are applicable to all the Contractor's construction work performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, the Contractor shall apply the goals established for the geographical area where the work is actually performed. Goals are published periodically in the Federal Register in notice form, and these notices may be obtained from any Office of Federal Contract Compliance Programs office.

(c) The Contractor's compliance with Executive Order 11246, as amended, and the regulations in 41 CFR 60-4 shall be based on (1) its implementation of the Equal Opportunity clause, (2) specific affirmative action obligations required by the clause entitled "Affirmative Action Compliance Requirements for Construction," and (3) its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade. The Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor, or from project to project, for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, Executive Order 11246, as amended, and the regulations in 41 CFR 60-4. Compliance with the goals will be measured against the total work hours performed.

(d) The Contractor shall provide written notification to the Deputy Assistant Secretary for Federal Contract Compliance, U.S. Department of Labor, within 10 working days following award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the --

- (1) Name, address, and telephone number of the subcontractor;
- (2) Employer's identification number of the subcontractor;
- (3) Estimated dollar amount of the subcontract;
- (4) Estimated starting and completion dates of the subcontract; and
- (5) Geographical area in which the subcontract is to be performed.

(e) As used in this Notice, and in any contract resulting from this solicitation, the "covered area" is **Ellsworth County, Kansas**

(End of provision)

52.225-10 NOTICE OF BUY AMERICAN REQUIREMENT--CONSTRUCTION MATERIALS (MAY 2014)

(a) Definitions. "Commercially available off-the-shelf (COTS) item," "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 --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 statute 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 statute 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 statute, 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.

(End of provision)

52.228-1 BID GUARANTEE (SEP 1996)

(a) Failure to furnish a bid guarantee in the proper form and amount, by the time set for opening of bids, may be cause for rejection of the bid.

(b) The bidder shall furnish a bid guarantee in the form of a firm commitment, e.g., bid bond supported by good and sufficient surety or sureties acceptable to the Government, postal money order, certified check, cashier's check, irrevocable letter of credit, or, under Treasury Department regulations, certain bonds or notes of the United States. The Contracting Officer will return bid guarantees, other than bid bonds, (1) to unsuccessful bidders as soon as practicable after the opening of bids, and (2) to the successful bidder upon execution of contractual documents and bonds (including any necessary coinsurance or reinsurance agreements), as required by the bid as accepted.-

(c) The amount of the bid guarantee shall be 20 percent of the bid price or \$3,000,000.00 whichever is less.-

(d) If the successful bidder, upon acceptance of its bid by the Government within the period specified for acceptance, fails to execute all contractual documents or furnish executed bond(s) within 10 days after receipt of the forms by the bidder, the Contracting Officer may terminate the contract for default.-

(e) In the event the contract is terminated for default, the bidder is liable for any cost of acquiring the work that exceeds the amount of its bid, and the bid guarantee is available to offset the difference.

(End of provision)

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

U.S. Army Corps of Engineers, Kansas City District
ATTN: David M. Best, CECT-NWK-C
Federal Building
601 E. 12th Street, RM 647
Kansas City, Missouri 64106-2896

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

(End of provision)

52.236-27 SITE VISIT (CONSTRUCTION) (FEB 1995)

(a) The clauses at 52.236-2, Differing Site Conditions, and 52.236-3, Site Investigations and Conditions Affecting the Work, will be included in any contract awarded as a result of this solicitation. Accordingly, offerors or quoters are urged and expected to inspect the site where the work will be performed.

**(b) An organized site visit has been scheduled for--
6 December 2022 @ 10:00 am CDT**

(c) Participants will meet at--

**Kanopolis Project Office
105 Riverside Drive
Marquette KS. 67464**

(End of provision)

52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998)

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. 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/these address(es):

<https://www.acquisition.gov/>

(End of provision)

TPL_NWK_001 Points of Contact

CONTRACT SPECIALIST:	Erynn Wright	PHONE	816-389-2131	E-MAIL:	Erynn.n.wright@usace.army.mil
PROJECT MANAGER:	Brad Pettijohn	PHONE	816-389-3823	E-MAIL:	Bradley.a.pettijohn@usace.army.mil

Section 00 45 00 - Representations and Certifications

CLAUSES INCORPORATED BY REFERENCE

52.204-19	Incorporation by Reference of Representations and Certifications.	DEC 2014
52.204-26	Covered Telecommunications Equipment or Services-- Representation.	OCT 2020
52.209-7	Information Regarding Responsibility Matters	OCT 2018
52.209-13	Violation of Arms Control Treaties or Agreements -- Certification	NOV 2021
52.225-25	Prohibition on Contracting with Entities Engaging in Certain Activities or Transactions Relating to Iran-- Representation and Certifications.	JUN 2020
252.203-7005	Representation Relating to Compensation of Former DoD Officials	NOV 2011
252.204-7007	Alternate A, Annual Representations and Certifications	MAY 2021
252.204-7008	Compliance With Safeguarding Covered Defense Information Controls	OCT 2016
252.204-7017	Prohibition on the Acquisition of Covered Defense Telecommunications Equipment or Services -- Representation	MAY 2021

CLAUSES INCORPORATED BY FULL TEXT

52.204-8 ANNUAL REPRESENTATIONS AND CERTIFICATIONS (MAY 2022)

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is 238320.

(2) The small business size standard is \$16,500,000.

(3) The small business size standard for a concern that submits an offer, other than on a construction or service acquisition, but proposes to furnish an end item that it did not itself manufacture, process, or produce is 500 employees if the acquisition--

(i) Is set aside for small business and has a value above the simplified acquisition threshold;

(ii) Uses the HUBZone price evaluation preference regardless of dollar value, unless the offeror waives the price evaluation preference; or

(iii) Is an 8(a), HUBZone, service-disabled veteran-owned, economically disadvantaged women-owned, or women-owned small business set-aside or sole-source award regardless of dollar value.

(b)(1) If the provision at 52.204-7, System for Award Management, is included in this solicitation, paragraph (d) of this provision applies.

(2) If the provision at 52.204-7, System for Award Management, is not included in this solicitation, and the Offeror has an active registration in the System for Award Management (SAM), the Offeror may choose to use paragraph (d) 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:

() Paragraph (d) applies.

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

(c) (1) The following representations or certifications in SAM are applicable to this solicitation as indicated:

(i) 52.203-2, Certificate of Independent Price Determination. This provision applies to solicitations when a firm-fixed-price contract or fixed-price contract with economic price adjustment is contemplated, unless—

(A) The acquisition is to be made under the simplified acquisition procedures in Part 13;

(B) The solicitation is a request for technical proposals under two-step sealed bidding procedures; or

(C) The solicitation is for utility services for which rates are set by law or regulation.

(ii) 52.203-11, Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions. This provision applies to solicitations expected to exceed \$150,000.

(iii) 52.203-18, Prohibition on Contracting with Entities that Require Certain Internal Confidentiality Agreements or Statements--Representation. This provision applies to all solicitations.

(iv) 52.204-3, Taxpayer Identification. This provision applies to solicitations that do not include the provision at 52.204-7, System for Award Management.

(v) 52.204-5, Women-Owned Business (Other Than Small Business). This provision applies to solicitations that—

(A) Are not set aside for small business concerns;

(B) Exceed the simplified acquisition threshold; and

(C) Are for contracts that will be performed in the United States or its outlying areas.

(vi) 52.204-26, Covered Telecommunications Equipment or Services--Representation. This provision applies to all solicitations.

(vii) 52.209-2, Prohibition on Contracting with Inverted Domestic Corporations--Representation.

(viii) 52.209-5, Certification Regarding Responsibility Matters. This provision applies to solicitations where the contract value is expected to exceed the simplified acquisition threshold.

(ix) 52.209-11, Representation by Corporations Regarding Delinquent Tax Liability or a Felony Conviction under any Federal Law. This provision applies to all solicitations.

(x) 52.214-14, Place of Performance--Sealed Bidding. This provision applies to invitations for bids except those in which the place of performance is specified by the Government.

(xi) 52.215-6, Place of Performance. This provision applies to solicitations unless the place of performance is specified by the Government.

(xii) 52.219-1, Small Business Program Representations (Basic, Alternates I, and II). This provision applies to solicitations when the contract is for supplies to be delivered or services to be performed in the United States or its outlying areas, or when the contracting officer has applied part 19 in accordance with 19.000(b)(1)(ii).

(A) The basic provision applies when the solicitations are issued by other than DoD, NASA, and the Coast Guard.

(B) The provision with its Alternate I applies to solicitations issued by DoD, NASA, or the Coast Guard.

(C) The provision with its Alternate II applies to solicitations that will result in a multiple-award contract with more than one NAICS code assigned.

(xiii) 52.219-2, Equal Low Bids. This provision applies to solicitations when contracting by sealed bidding and the contract is for supplies to be delivered or services to be performed in the United States or its outlying areas, or when the contracting officer has applied part 19 in accordance with 19.000(b)(1)(ii).

(xiv) 52.222-22, Previous Contracts and Compliance Reports. This provision applies to solicitations that include the clause at 52.222-26, Equal Opportunity.

(xv) 52.222-25, Affirmative Action Compliance. This provision applies to solicitations, other than those for construction, when the solicitation includes the clause at 52.222-26, Equal Opportunity.

(xvi) 52.222-38, Compliance with Veterans' Employment Reporting Requirements. This provision applies to solicitations when it is anticipated the contract award will exceed the simplified acquisition threshold and the contract is not for acquisition of commercial products or commercial services.

(xvii) 52.223-1, Biobased Product Certification. This provision applies to solicitations that require the delivery or specify the use of USDA-designated items; or include the clause at 52.223-2, Affirmative Procurement of Biobased Products Under Service and Construction Contracts.

(xviii) 52.223-4, Recovered Material Certification. This provision applies to solicitations that are for, or specify the use of, EPA- designated items.

(xix) 52.223-22, Public Disclosure of Greenhouse Gas Emissions and Reduction Goals--Representation. This provision applies to solicitations that include the clause at 52.204-7.)

(xx) 52.225-2, Buy American Certificate. This provision applies to solicitations containing the clause at 52.225-1.

(xxi) 52.225-4, Buy American--Free Trade Agreements--Israeli Trade Act Certificate. (Basic, Alternates I, II, and III.) This provision applies to solicitations containing the clause at 52.225- 3.

(A) If the acquisition value is less than \$25,000, the basic provision applies.

(B) If the acquisition value is \$25,000 or more but is less than \$50,000, the provision with its Alternate I applies.

(C) If the acquisition value is \$50,000 or more but is less than \$92,319, the provision with its Alternate II applies.

(D) If the acquisition value is \$92,319 or more but is less than \$100,000, the provision with its Alternate III applies.

(xxii) 52.225-6, Trade Agreements Certificate. This provision applies to solicitations containing the clause at 52.225-5.

(xxiii) 52.225-20, Prohibition on Conducting Restricted Business Operations in Sudan--Certification. This provision applies to all solicitations.

(xxiv) 52.225-25, Prohibition on Contracting with Entities Engaging in Certain Activities or Transactions Relating to Iran—Representation and Certification. This provision applies to all solicitations.

(xxv) 52.226-2, Historically Black College or University and Minority Institution Representation. This provision applies to solicitations for research, studies, supplies, or services of the type normally acquired from higher educational institutions.

(2) The following representations or certifications are applicable as indicated by the Contracting Officer:

[Contracting Officer check as appropriate.]

(i) 52.204-17, Ownership or Control of Offeror.

(ii) 52.204-20, Predecessor of Offeror.

(iii) 52.222-18, Certification Regarding Knowledge of Child Labor for Listed End Products.

(iv) 52.222-48, Exemption from Application of the Service Contract Labor Standards to Contracts for Maintenance, Calibration, or Repair of Certain Equipment--Certification.

(v) 52.222-52 Exemption from Application of the Service Contract Labor Standards to Contracts for Certain Services--Certification.

(vi) 52.223-9, with its Alternate I, Estimate of Percentage of Recovered Material Content for EPA-Designated Products (Alternate I only).

(vii) 52.227-6, Royalty Information.

(A) Basic.

(B) Alternate I.

(viii) 52.227-15, Representation of Limited Rights Data and Restricted Computer Software.

(d) The Offeror has completed the annual representations and certifications electronically in SAM accessed through <https://www.sam.gov>. After reviewing the SAM information, the Offeror verifies by submission of the offer that the representations and certifications currently posted electronically that apply to this solicitation as indicated in paragraph (c) of this provision 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

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 SAM.

(End of provision)

52.204-24 REPRESENTATION REGARDING CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT (NOV 2021)

The Offeror shall not complete the representation at paragraph (d)(1) of this provision if the Offeror has represented that it "does not provide covered telecommunications equipment or services as a part of its offered products or services to the Government in the performance of any contract, subcontract, or other contractual instrument" in paragraph (c)(1) in the provision at 52.204-26, Covered Telecommunications Equipment or Services-- Representation, or in paragraph (v)(2)(i) of the provision at 52.212-3, Offeror Representations and Certifications- Commercial Products and Commercial Services. The Offeror shall not complete the representation in paragraph (d)(2) of this provision if the Offeror has represented that it "does not use covered telecommunications equipment or services, or any equipment, system, or service that uses covered telecommunications equipment or services" in paragraph (c)(2) of the provision at 52.204-26, or in paragraph (v)(2)(ii) of the provision at 52.212-3.

(a) Definitions. As used in this provision-

Backhaul, covered telecommunications equipment or services, critical technology, interconnection arrangements, reasonable inquiry, roaming, and substantial or essential component have the meanings provided in the clause 52.204-25, Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment.

(b) Prohibition.

(1) Section 889(a)(1)(A) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2019, from procuring or obtaining, or extending or renewing a contract to procure or obtain, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. Nothing in the prohibition shall be construed to--

(i) Prohibit the head of an executive agency from procuring with an entity to provide a service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or

(ii) Cover telecommunications equipment that cannot route or redirect user data traffic or cannot permit visibility into any user data or packets that such equipment transmits or otherwise handles.

(2) Section 889(a)(1)(B) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2020, from entering into a contract or extending or renewing a contract with an entity that uses any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. This prohibition applies to the use of covered telecommunications equipment or services, regardless of whether that use is in performance of work under a Federal contract. Nothing in the prohibition shall be construed to--

(i) Prohibit the head of an executive agency from procuring with an entity to provide a service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or

(ii) Cover telecommunications equipment that cannot route or redirect user data traffic or cannot permit visibility into any user data or packets that such equipment transmits or otherwise handles.

(c) Procedures. The Offeror shall review the list of excluded parties in the System for Award Management (SAM) (<https://www.sam.gov>) for entities excluded from receiving federal awards for "covered telecommunications equipment or services."

(d) Representations. The Offeror represents that--

(1) It [___] will, [___] will not provide covered telecommunications equipment or services to the Government in the performance of any contract, subcontract or other contractual instrument resulting from this solicitation. The Offeror shall provide the additional disclosure information required at paragraph (e)(1) of this section if the Offeror responds "will" in paragraph (d)(1) of this section; and

(2) After conducting a reasonable inquiry, for purposes of this representation, the Offeror represents that--

It [___] does, [___] does not use covered telecommunications equipment or services, or use any equipment, system, or service that uses covered telecommunications equipment or services. The Offeror shall provide the additional disclosure information required at paragraph (e)(2) of this section if the Offeror responds "does" in paragraph (d)(2) of this section.

(e) Disclosures.

(1) Disclosure for the representation in paragraph (d)(1) of this provision. If the Offeror has responded "will" in the representation in paragraph (d)(1) of this provision, the Offeror shall provide the following information as part of the offer:

(i) For covered equipment--

(A) The entity that produced the covered telecommunications equipment (include entity name, unique entity identifier, CAGE code, and whether the entity was the original equipment manufacturer (OEM) or a distributor, if known);

(B) A description of all covered telecommunications equipment offered (include brand; model number, such as OEM number, manufacturer part number, or wholesaler number; and item description, as applicable); and

(C) Explanation of the proposed use of covered telecommunications equipment and any factors relevant to determining if such use would be permissible under the prohibition in paragraph (b)(1) of this provision.

(ii) For covered services--

(A) If the service is related to item maintenance: A description of all covered telecommunications services offered (include on the item being maintained: Brand; model number, such as OEM number, manufacturer part number, or wholesaler number; and item description, as applicable); or

(B) If not associated with maintenance, the Product Service Code (PSC) of the service being provided; and explanation of the proposed use of covered telecommunications services and any factors relevant to determining if such use would be permissible under the prohibition in paragraph (b)(1) of this provision.

(2) Disclosure for the representation in paragraph (d)(2) of this provision. If the Offeror has responded "does" in the representation in paragraph (d)(2) of this provision, the Offeror shall provide the following information as part of the offer:

(i) For covered equipment--

(A) The entity that produced the covered telecommunications equipment (include entity name, unique entity identifier, CAGE code, and whether the entity was the OEM or a distributor, if known);

(B) A description of all covered telecommunications equipment offered (include brand; model number, such as OEM number, manufacturer part number, or wholesaler number; and item description, as applicable); and

(C) Explanation of the proposed use of covered telecommunications equipment and any factors relevant to determining if such use would be permissible under the prohibition in paragraph (b)(2) of this provision.

(ii) For covered services--

(A) If the service is related to item maintenance: A description of all covered telecommunications services offered (include on the item being maintained: Brand; model number, such as OEM number, manufacturer part number, or wholesaler number; and item description, as applicable); or

(B) If not associated with maintenance, the PSC of the service being provided; and explanation of the proposed use of covered telecommunications services and any factors relevant to determining if such use would be permissible under the prohibition in paragraph (b)(2) of this provision.

(End of provision)

Section 00 70 00 - Conditions of the Contract

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
0001	Destination	Government	Destination	Government
0002	N/A	N/A	N/A	Government

Section 00 72 00 - General Conditions

E-VERIFY

Contractors shall comply with the requirements set forth in FAR clause 52.222-54 Employment Eligibility Verification and FAR Subpart 22.18 in using the E-Verify Program at (<https://www.e-verify.gov/>) (website subject to change) to meet the contract employment eligibility requirements. Contractors are encouraged to cooperate with Federal and State agencies responsible for enforcing labor requirements to include eligibility for employment under United States immigration laws in accordance with FAR 22.102-1(i). An initial list of verified/eligible candidates shall be provided to the COR no later than three business days after the initial contract award. When contracts are with individuals, the individuals will be required to complete a Form I-9, Employment Eligibility Verification, and submit it to the Contracting Officer to become part of the official contract file.

CLAUSES INCORPORATED BY REFERENCE

52.202-1	Definitions	JUN 2020
52.203-3	Gratuities	APR 1984
52.203-5	Covenant Against Contingent Fees	MAY 2014
52.203-6	Restrictions On Subcontractor Sales To The Government	JUN 2020
52.203-7	Anti-Kickback Procedures	JUN 2020
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity	MAY 2014
52.203-10	Price Or Fee Adjustment For Illegal Or Improper Activity	MAY 2014
52.203-12	Limitation On Payments To Influence Certain Federal Transactions	JUN 2020
52.203-13	Contractor Code of Business Ethics and Conduct	NOV 2021
52.203-19	Prohibition on Requiring Certain Internal Confidentiality Agreements or Statements	JAN 2017
52.204-4	Printed or Copied Double-Sided on Postconsumer Fiber Content Paper	MAY 2011
52.204-10	Reporting Executive Compensation and First-Tier Subcontract Awards	JUN 2020
52.204-13	System for Award Management Maintenance	OCT 2018
52.204-23	Prohibition on Contracting for Hardware, Software, and Services Developed or Provided by Kaspersky Lab and Other Covered Entities	NOV 2021
52.204-25	Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment	NOV 2021
52.209-6	Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, or Proposed for Debarment	NOV 2021
52.209-10	Prohibition on Contracting With Inverted Domestic Corporations	NOV 2015
52.210-1	Market Research	NOV 2021
52.211-13	Time Extensions	SEP 2000
52.211-18	Variation in Estimated Quantity	APR 1984
52.219-8	Utilization of Small Business Concerns	OCT 2018
52.222-1	Notice To The Government Of Labor Disputes	FEB 1997
52.222-3	Convict Labor	JUN 2003
52.222-4	Contract Work Hours and Safety Standards - Overtime Compensation	MAY 2018
52.222-6	Construction Wage Rate Requirements	AUG 2018
52.222-7	Withholding of Funds	MAY 2014
52.222-9	Apprentices and Trainees	JUL 2005

52.222-10	Compliance with Copeland Act Requirements	FEB 1988
52.222-11	Subcontracts (Labor Standards)	MAY 2014
52.222-12	Contract Termination-Debarment	MAY 2014
52.222-13	Compliance With Construction Wage Rate Requirements and Related Regulations	MAY 2014
52.222-14	Disputes Concerning Labor Standards	FEB 1988
52.222-15	Certification of Eligibility	MAY 2014
52.222-21	Prohibition Of Segregated Facilities	APR 2015
52.222-26	Equal Opportunity	SEP 2016
52.222-27	Affirmative Action Compliance Requirements for Construction	APR 2015
52.222-35	Equal Opportunity for Veterans	JUN 2020
52.222-36	Equal Opportunity for Workers with Disabilities	JUN 2020
52.222-37	Employment Reports on Veterans	JUN 2020
52.222-40	Notification of Employee Rights Under the National Labor Relations Act	DEC 2010
52.222-50	Combating Trafficking in Persons	NOV 2021
52.222-54	Employment Eligibility Verification	MAY 2022
52.222-55	Minimum Wages for Contractor Workers Under Executive Order 14026	JAN 2022
52.222-62	Paid Sick Leave Under Executive Order 13706	JAN 2022
52.223-2	Affirmative Procurement of Biobased Products Under Service and Construction Contracts	SEP 2013
52.223-6	Drug-Free Workplace	MAY 2001
52.223-12	Maintenance, Service, Repair, or Disposal of Refrigeration Equipment and Air Conditioners.	JUN 2016
52.223-17	Affirmative Procurement of EPA-Designated Items in Service and Construction Contracts	AUG 2018
52.223-18	Encouraging Contractor Policies To Ban Text Messaging While Driving	JUN 2020
52.225-13	Restrictions on Certain Foreign Purchases	FEB 2021
52.227-1	Authorization and Consent	JUN 2020
52.227-2	Notice And Assistance Regarding Patent And Copyright Infringement	JUN 2020
52.227-4	Patent Indemnity-Construction Contracts	DEC 2007
52.228-2	Additional Bond Security	OCT 1997
52.228-5	Insurance - Work On A Government Installation	JAN 1997
52.228-11	Individual Surety--Pledge of Assets	FEB 2021
52.228-12	Prospective Subcontractor Requests for Bonds	MAY 2014
52.228-15	Performance and Payment Bonds--Construction	JUN 2020
52.229-3	Federal, State And Local Taxes	FEB 2013
52.232-3	Payments under Personal Services Contracts	APR 1984
52.232-5	Payments under Fixed-Price Construction Contracts	MAY 2014
52.232-17	Interest	MAY 2014
52.232-23	Assignment Of Claims	MAY 2014
52.232-27	Prompt Payment for Construction Contracts	JAN 2017
52.232-33	Payment by Electronic Funds Transfer--System for Award Management	OCT 2018
52.232-39	Unenforceability of Unauthorized Obligations	JUN 2013
52.232-40	Providing Accelerated Payments to Small Business Subcontractors	NOV 2021
52.233-1	Disputes	MAY 2014
52.233-3	Protest After Award	AUG 1996
52.233-4	Applicable Law for Breach of Contract Claim	OCT 2004
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
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
52.242-13	Bankruptcy	JUL 1995
52.242-14	Suspension of Work	APR 1984
52.242-15	Stop-Work Order	AUG 1989
52.243-4	Changes	JUN 2007
52.244-6	Subcontracts for Commercial Products and Commercial Services	JAN 2022
52.246-12	Inspection of Construction	AUG 1996
52.246-21	Warranty of Construction	MAR 1994
52.248-3	Value Engineering-Construction	OCT 2020
52.249-2 Alt I	Termination for Convenience of the Government (Fixed-Price) (Apr 2012) - Alternate I	SEP 1996
52.253-1	Computer Generated Forms	JAN 1991
252.201-7000	Contracting Officer's Representative	DEC 1991
252.203-7000	Requirements Relating to Compensation of Former DoD Officials	SEP 2011
252.203-7002	Requirement to Inform Employees of Whistleblower Rights	SEP 2013
252.203-7003	Agency Office of the Inspector General	AUG 2019
252.203-7004	Display of Hotline Posters	AUG 2019
252.204-7000	Disclosure Of Information	OCT 2016
252.204-7003	Control Of Government Personnel Work Product	APR 1992
252.204-7004	Antiterrorism Awareness Training for Contractors.	FEB 2019
252.204-7009	Limitations on the Use or Disclosure of Third-Party Contractor Reported Cyber Incident Information	OCT 2016
252.204-7012	Safeguarding Covered Defense Information and Cyber Incident Reporting	DEC 2019
252.204-7015	Notice of Authorized Disclosure of Information for Litigation Support	MAY 2016
252.204-7018	Prohibition on the Acquisition of Covered Defense Telecommunications Equipment or Services	JAN 2021
252.204-7019	Notice of NIST SP 800-171 DoD Assessment Requirements	MAR 2022
252.204-7020	NIST SP 800-171 DoD Assessment Requirements	MAR 2022
252.205-7000	Provision Of Information To Cooperative Agreement Holders	DEC 1991
252.209-7004	Subcontracting With Firms That Are Owned or Controlled By The Government of a Country that is a State Sponsor of Terrorism	MAY 2019
252.223-7008	Prohibition of Hexavalent Chromium	JUN 2013
252.225-7012	Preference For Certain Domestic Commodities	APR 2022
252.225-7048	Export-Controlled Items	JUN 2013
252.227-7033	Rights in Shop Drawings	APR 1966
252.232-7003	Electronic Submission of Payment Requests and Receiving Reports	DEC 2018

252.232-7010	Levies on Contract Payments	DEC 2006
252.236-7000	Modification Proposals-Price Breakdown	DEC 1991
252.236-7002	Obstruction of Navigable Waterways	DEC 1991
252.242-7006	Accounting System Administration	FEB 2012
252.243-7001	Pricing Of Contract Modifications	DEC 1991
252.243-7002	Requests for Equitable Adjustment	DEC 2012
252.244-7000	Subcontracts for Commercial Items	JAN 2021
252.247-7023	Transportation of Supplies by Sea	FEB 2019

CLAUSES INCORPORATED BY FULL TEXT

52.204-21 BASIC SAFEGUARDING OF COVERED CONTRACTOR INFORMATION SYSTEMS (NOV 2021)

(a) Definitions. As used in this clause--

Covered contractor information system means an information system that is owned or operated by a contractor that processes, stores, or transmits Federal contract information.

Federal contract information means information, not intended for public release, that is provided by or generated for the Government under a contract to develop or deliver a product or service to the Government, but not including information provided by the Government to the public (such as on public websites) or simple transactional information, such as necessary to process payments.

Information means any communication or representation of knowledge such as facts, data, or opinions, in any medium or form, including textual, numerical, graphic, cartographic, narrative, or audiovisual (Committee on National Security Systems Instruction (CNSSI) 4009).

Information system means a discrete set of information resources organized for the collection, processing, maintenance, use, sharing, dissemination, or disposition of information (44 U.S.C. 3502).

Safeguarding means measures or controls that are prescribed to protect information systems.

(b) Safeguarding requirements and procedures.

(1) The Contractor shall apply the following basic safeguarding requirements and procedures to protect covered contractor information systems. Requirements and procedures for basic safeguarding of covered contractor information systems shall include, at a minimum, the following security controls:

(i) Limit information system access to authorized users, processes acting on behalf of authorized users, or devices (including other information systems).

(ii) Limit information system access to the types of transactions and functions that authorized users are permitted to execute.

(iii) Verify and control/limit connections to and use of external information systems.

(iv) Control information posted or processed on publicly accessible information systems.

(v) Identify information system users, processes acting on behalf of users, or devices.

(vi) Authenticate (or verify) the identities of those users, processes, or devices, as a prerequisite to allowing access to organizational information systems.

- (vii) Sanitize or destroy information system media containing Federal Contract Information before disposal or release for reuse.
 - (viii) Limit physical access to organizational information systems, equipment, and the respective operating environments to authorized individuals.
 - (ix) Escort visitors and monitor visitor activity; maintain audit logs of physical access; and control and manage physical access devices.
 - (x) Monitor, control, and protect organizational communications (i.e., information transmitted or received by organizational information systems) at the external boundaries and key internal boundaries of the information systems.
 - (xi) Implement subnetworks for publicly accessible system components that are physically or logically separated from internal networks.
 - (xii) Identify, report, and correct information and information system flaws in a timely manner.
 - (xiii) Provide protection from malicious code at appropriate locations within organizational information systems.
 - (xiv) Update malicious code protection mechanisms when new releases are available.
 - (xv) Perform periodic scans of the information system and real-time scans of files from external sources as files are downloaded, opened, or executed.
- (2) Other requirements. This clause does not relieve the Contractor of any other specific safeguarding requirements specified by Federal agencies and departments relating to covered contractor information systems generally or other Federal safeguarding requirements for controlled unclassified information (CUI) as established by Executive Order 13556.
- (c) Subcontracts. The Contractor shall include the substance of this clause, including this paragraph (c), in subcontracts under this contract (including subcontracts for the acquisition of commercial products or commercial services, other than commercially available off-the-shelf items), in which the subcontractor may have Federal contract information residing in or transiting through its information system.

(End of clause)

52.211-10 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (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 **180 days after Notice to Proceed**. The time stated for completion shall include final cleanup of the premises.

(End of clause)

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 **\$1,160.00** for each calendar day of delay until the work is completed or accepted.

(b) If the Government terminates the Contractor's right to proceed, liquidated damages will continue to accrue until the work is completed. These liquidated damages are in addition to excess costs of repurchase under the Termination clause.

(End of clause)

52.214-27 PRICE REDUCTION FOR DEFECTIVE CERTIFIED COST OR PRICING DATA - MODIFICATIONS - SEALED BIDDING. (JUN 2020)

(a) This clause shall become operative only for any modification to this contract involving aggregate increases and/or decreases in costs, plus applicable profits, expected to exceed the threshold for the submission of certified cost or pricing data in Federal Acquisition Regulation (FAR) 15.403-4(a)(1) on the date of execution of the modification, except that this clause does not apply to a modification if an exception under FAR 15.403-1(b) applies.

(b) If any price, including profit, negotiated in connection with any modification under this clause, was increased by any significant amount because

(1) the Contractor or a subcontractor furnished certified cost or pricing data that were not complete, accurate, and current as certified in its Certificate of Current Cost or Pricing Data;

(2) a subcontractor or prospective subcontractor furnished the Contractor certified cost or pricing data that were not complete, accurate, and current as certified in the Contractor's Certificate of Current Cost or Pricing Data; or

(3) any of these parties furnished data of any description that were not accurate, the price shall be reduced accordingly and the contract shall be modified to reflect the reduction. This right to a price reduction is limited to that resulting from defects in data relating to modifications for which this clause becomes operative under paragraph (a) above.

(c) Any reduction in the contract price under paragraph (b) of this clause due to defective data from a prospective subcontractor that was not subsequently awarded the subcontract shall be limited to the amount, plus applicable overhead and profit markup, by which:

(1) the actual subcontract; or

(2) the actual cost to the Contractor, if there was no subcontract, was less than the prospective subcontract cost estimate submitted by the Contractor; provided, that the actual subcontract price was not itself affected by defective certified cost or pricing data.

(d) If the Contracting Officer determines under paragraph (b) of this clause that a price or cost reduction should be made:

(1) the Contractor agrees not to raise the following matters as a defense:

(i) The Contractor or subcontractor was a sole source supplier or otherwise was in a superior bargaining position and thus the price of the contract would not have been modified even if accurate, complete, and current certified cost or pricing data had been submitted;

(ii) The Contracting Officer should have known that the certified cost or pricing data in issue were defective even though the Contractor or subcontractor took no affirmative action to bring the character of the data to the attention of the Contracting Officer;

(iii) The contract was based on an agreement about the total cost of the contract and there was no agreement about the cost of each item procured under the contract; or

(iv) The Contractor or subcontractor did not submit a Certificate of Current Cost or Pricing Data.

(2) Except as prohibited by subdivision (d)(2)(ii) of this clause:

(i) an offset in an amount determined appropriate by the Contracting Officer based upon the facts shall be allowed against the amount of a contract price reduction if:

(A) The Contractor certifies to the Contracting Officer that, to the best of the Contractor's knowledge and belief, the Contractor is entitled to the offset in the amount requested; and

(B) The Contractor proves that the certified cost or pricing data were available before the date of agreement on the price of the contract (or price of the modification) and that the data were not submitted before such date.

(ii) An offset shall not be allowed if:

(A) The understated data was known by the Contractor to be understated when the Certificate of Current Cost or Pricing Data was signed; or (B) The Government proves that the facts demonstrate that the contract price would not have increased in the amount to be offset even if the available data had been submitted before the date of agreement on price.

(e) If any reduction in the contract price under this clause reduces the price of items for which payment was made prior to the date of the modification reflecting the price reduction, the Contractor shall be liable to and shall pay the United States at the time such overpayment is repaid:

(1) Interest compounded daily, as required by 26 U.S.C. 6622, on the amount of such overpayment to be computed from the date(s) of overpayment to the Contractor to the date the Government is repaid by the Contractor at the applicable underpayment rate effective for each quarter prescribed by the Secretary of the Treasury under 26 U.S.C. 6621(a)(2); and

(2) A penalty equal to the amount of the overpayment, if the Contractor or subcontractor knowingly submitted certified cost or pricing data which were incomplete, inaccurate, or noncurrent.

(End of clause)

52.219-6 NOTICE OF TOTAL SMALL BUSINESS SET-ASIDE (NOV 2020)

(a) Definition. Small business concern, as used in this clause--

(1) 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 size standards in this solicitation.

(2) Affiliates, as used in paragraph (a)(1) of this clause, means business concerns, one of whom directly or indirectly controls or has the power to control the others, or a third party or parties control or have the power to control the others. In determining whether affiliation exists, consideration is given to all appropriate factors including common

ownership, common management, and contractual relationships. SBA determines affiliation based on the factors set forth at 13 CFR 121.103.

(b) Applicability. This clause applies only to--

- (1) Contracts that have been totally set aside for small business concerns; and
- (2) Orders set aside for small business concerns under multiple-award contracts as described in 8.405-5 and 16.505(b)(2)(i)(F).

(c) General. (1) Offers are solicited only from small business concerns. Offers received from concerns that are not small business concerns shall be considered nonresponsive and will be rejected.

(2) Any award resulting from this solicitation will be made to a small business concern.

(End of clause)

52.219-14 LIMITATIONS ON SUBCONTRACTING (SEP 2021)

(a) This clause does not apply to the unrestricted portion of a partial set-aside.

(b) Definition. Similarly situated entity, as used in this clause, means a first-tier subcontractor, including an independent contractor, that--

- (1) Has the same small business program status as that which qualified the prime contractor for the award (e.g., for a small business set-aside contract, any small business concern, without regard to its socioeconomic status); and
- (2) Is considered small for the size standard under the North American Industry Classification System (NAICS) code the prime contractor assigned to the subcontract.

(c) Applicability. This clause applies only to--

- (1) Contracts that have been set aside for any of the small business concerns identified in 19.000(a)(3);
- (2) Part or parts of a multiple-award contract that have been set aside for any of the small business concerns identified in 19.000(a)(3);
- (3) Contracts that have been awarded on a sole-source basis in accordance with subparts 19.8, 19.13, 19.14, and 19.15;
- (4) Orders expected to exceed the simplified acquisition threshold and that are--
 - (i) Set aside for small business concerns under multiple-award contracts, as described in 8.405-5 and 16.505(b)(2)(i)(F); or
 - (ii) Issued directly to small business concerns under multiple-award contracts as described in 19.504(c)(1)(ii);
- (5) Orders, regardless of dollar value, that are--
 - (i) Set aside in accordance with subparts 19.8, 19.13, 19.14, or 19.15 under multiple-award contracts, as described in 8.405-5 and 16.505(b)(2)(i)(F); or

(ii) Issued directly to concerns that qualify for the programs described in subparts 19.8, 19.13, 19.14, or 19.15 under multiple-award contracts, as described in 19.504(c)(1)(ii); and

(6) Contracts using the HUBZone price evaluation preference to award to a HUBZone small business concern unless the concern waived the evaluation preference.

(d) Independent contractors. An independent contractor shall be considered a subcontractor.

(e) Limitations on subcontracting. By submission of an offer and execution of a contract, the Contractor agrees that in performance of a contract assigned a North American Industry Classification System (NAICS) code for--

(1) Services (except construction), it will not pay more than 50 percent of the amount paid by the Government for contract performance to subcontractors that are not similarly situated entities. Any work that a similarly situated entity further subcontracts will count towards the prime contractor's 50 percent subcontract amount that cannot be exceeded. When a contract includes both services and supplies, the 50 percent limitation shall apply only to the service portion of the contract;

(2) Supplies (other than procurement from a nonmanufacturer of such supplies), it will not pay more than 50 percent of the amount paid by the Government for contract performance, excluding the cost of materials, to subcontractors that are not similarly situated entities. Any work that a similarly situated entity further subcontracts will count towards the prime contractor's 50 percent subcontract amount that cannot be exceeded. When a contract includes both supplies and services, the 50 percent limitation shall apply only to the supply portion of the contract;

(3) General construction, it will not pay more than 85 percent of the amount paid by the Government for contract performance, excluding the cost of materials, to subcontractors that are not similarly situated entities. Any work that a similarly situated entity further subcontracts will count towards the prime contractor's 85 percent subcontract amount that cannot be exceeded; or

(4) Construction by special trade contractors, it will not pay more than 75 percent of the amount paid by the Government for contract performance, excluding the cost of materials, to subcontractors that are not similarly situated entities. Any work that a similarly situated entity further subcontracts will count towards the prime contractor's 75 percent subcontract amount that cannot be exceeded.

(f) The Contractor shall comply with the limitations on subcontracting as follows:

(1) For contracts, in accordance with paragraphs (c)(1), (2), (3) and (6) of this clause--

[Contracting Officer check as appropriate.]

XBy the end of the base term of the contract and then by the end of each subsequent option period; or

___ By the end of the performance period for each order issued under the contract.

(2) For orders, in accordance with paragraphs (c)(4) and (5) of this clause, by the end of the performance period for the order.

(g) A joint venture agrees that, in the performance of the contract, the applicable percentage specified in paragraph

(e) of this clause will be performed by the aggregate of the joint venture participants.

(End of clause)

(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 at 52.217-8, Option to Extend Services, or other appropriate authority.

Small business concern--

(1) 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 (d) of this clause. Such a concern is "not dominant in its field of operation" when it does not exercise a controlling or major influence on a national basis in a kind of business activity in which a number of business concerns are primarily engaged. In determining whether dominance exists, consideration shall be given to all appropriate factors, including volume of business, number of employees, financial resources, competitive status or position, ownership or control of materials, processes, patents, license agreements, facilities, sales territory, and nature of business activity.

(2) Affiliates, as used in this definition, means business concerns, one of whom directly or indirectly controls or has the power to control the others, or a third party or parties control or have the power to control the others. In determining whether affiliation exists, consideration is given to all appropriate factors including common ownership, common management, and contractual relationships. SBA determines affiliation based on the factors set forth at 13 CFR 121.103.

(b) If the Contractor represented that it was any of the small business concerns identified in 19.000(a)(3) prior to award of this contract, the Contractor shall rerepresent its size and socioeconomic status according to paragraph (f) of this clause or, if applicable, paragraph (h) of this clause, upon 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 date specified in the contract for exercising any option thereafter.

(c) If the Contractor represented that it was any of the small business concerns identified in 19.000(a)(3) prior to award of this contract, the Contractor shall rerepresent its size and socioeconomic status according to paragraph (f) of this clause or, if applicable, paragraph (h) of this clause, when the Contracting Officer explicitly requires it for an order issued under a multiple-award contract.

(d) The Contractor shall rerepresent its size status in accordance with the size standard in effect at the time of this rerepresentation that corresponds to the North American Industry Classification System (NAICS) code(s) assigned to this contract. The small business size standard corresponding to this NAICS code(s) can be found at <https://www.sba.gov/document/support--table-size-standards>.

(e) The small business size standard for a Contractor providing an end item that it does not manufacture, process, or produce itself, for a contract other than a construction or service contract, is 500 employees if the acquisition--

- (1) Was set aside for small business and has a value above the simplified acquisition threshold;
- (2) Used the HUBZone price evaluation preference regardless of dollar value, unless the Contractor waived the price evaluation preference; or
- (3) Was an 8(a), HUBZone, service-disabled veteran-owned, economically disadvantaged women-owned, or women-owned small business set-aside or sole-source award regardless of dollar value.

(f) Except as provided in paragraph (h) of this clause, the Contractor shall make the representation(s) required by paragraph (b) and (c) of this clause by validating or updating all its representations in the Representations and Certifications section of the System for Award Management (SAM) and its other data in SAM, as necessary, to ensure that they reflect the Contractor's current status. The Contractor shall notify the contracting office in writing within the timeframes specified in paragraph (b) of this clause, or with its offer for an order (see paragraph (c) of this clause), that the data have been validated or updated, and provide the date of the validation or update.

(g) 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 (f) or (h) of this clause.

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

(1) The Contractor represents that it [] is, [] is not a small business concern under NAICS Code **238320** assigned to contract number **TBD**.

(2) [Complete only if the Contractor represented itself as a small business concern in paragraph (h)(1) of this clause.] The Contractor represents that it [] is, [] is not, a small disadvantaged business concern as defined in 13 CFR 124.1002.

(3) [Complete only if the Contractor represented itself as a small business concern in paragraph (h)(1) of this clause.] The Contractor represents that it [] is, [] is not a women-owned small business concern.

(4) Women-owned small business (WOSB) concern eligible under the WOSB Program. [Complete only if the Contractor represented itself as a women-owned small business concern in paragraph (h)(3) of this clause.] The Contractor represents that--

(i) It [] is, [] is not a WOSB concern eligible under the WOSB Program, has provided all the required documents to the WOSB Repository, and no change in circumstances or adverse decisions have been issued that affects its eligibility; and

(ii) It [] is, [] is not a joint venture that complies with the requirements of 13 CFR part 127, and the representation in paragraph (h)(4)(i) of this clause is accurate for each WOSB concern eligible under the WOSB Program participating in the joint venture.

[The Contractor shall enter the name or names of the WOSB concern eligible under the WOSB Program and other small businesses that are participating in the joint venture: .] Each WOSB concern eligible under the WOSB Program participating in the joint venture shall submit a separate signed copy of the WOSB representation.

(5) Economically disadvantaged women-owned small business (EDWOSB) concern. [Complete only if the Contractor represented itself as a women-owned small business concern eligible under the WOSB Program in (h)(4) of this clause.] The Contractor represents that--

(i) It [] is, [] is not an EDWOSB concern eligible under the WOSB Program, has provided all the required documents to the WOSB Repository, and no change in circumstances or adverse decisions have been issued that affects its eligibility; and

(ii) It [] is, [] is not a joint venture that complies with the requirements of 13 CFR part 127, and the representation in paragraph (h)(5)(i) of this clause is accurate for each EDWOSB concern participating in the joint venture. [The Contractor shall enter the name or names of the EDWOSB concern and other small businesses that are participating in the joint venture: .] Each EDWOSB concern participating in the joint venture shall submit a separate signed copy of the EDWOSB representation.

(6) [Complete only if the Contractor represented itself as a small business concern in paragraph (h)(1) of this clause.] The Contractor represents that it [] is, [] is not a veteran-owned small business concern.

(7) [Complete only if the Contractor represented itself as a veteran-owned small business concern in paragraph (h)(6) of this clause.] The Contractor represents that it [] is, [] is not a service-disabled veteran-owned small business concern.

(8) [Complete only if the Contractor represented itself as a small business concern in paragraph (h)(1) of this clause.] The Contractor represents that--

(i) It [] is, [] is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material changes in ownership and control, principal office, or HUBZone employee percentage have occurred since it was certified in accordance with 13 CFR part 126; and

(ii) It [] is, [] is not a HUBZone joint venture that complies with the requirements of 13 CFR part 126, and the representation in paragraph (h)(8)(i) of this clause is accurate for each HUBZone small business concern participating in the HUBZone joint venture. [The Contractor shall enter the names of each of the HUBZone small business concerns participating in the HUBZone joint venture: .] Each HUBZone small business concern participating in the HUBZone joint venture shall submit a separate signed copy of the HUBZone representation.

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

(End of clause)

52.222-8 PAYROLLS AND BASIC RECORDS (JUL 2021)

(a) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of 3 years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 40 U.S.C. 3141(2)(B) (Construction Wage Rate Requirement statute)), daily and weekly number of hours worked, deductions made, and actual wages paid. Whenever the Secretary of Labor has found, under paragraph (d) of the clause entitled Construction Wage Rate Requirements, that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in 40 U.S.C. 3141(2)(B), the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of

the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(b)(1) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Contracting Officer. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under paragraph(a) of this clause, except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be obtained from the U.S. Department of Labor Wage and Hour Division website at <https://www.dol.gov/agencies/whd/forms>. The Prime Contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the Contracting Officer, the Contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a Prime Contractor to require a subcontractor to provide addresses and social security numbers to the Prime Contractor for its own records, without weekly submission to the Contracting Officer.

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify--

(i) That the payroll for the payroll period contains the information required to be maintained under paragraph (a) of this clause and that such information is correct and complete;

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

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

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

(4) The falsification of any of the certifications in this clause may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 3729 of Title 31 of the United States Code.

(c) The Contractor or subcontractor shall make the records required under paragraph (a) of this clause available for inspection, copying, or transcription by the Contracting Officer or authorized representatives of the Contracting Officer or the Department of Labor. The Contractor or subcontractor shall permit the Contracting Officer or representatives of the Contracting Officer or the Department of Labor to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit required records or to make them available, the Contracting Officer may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(End of clause)

DESIGNATED ITEMS (MAY 2008)

(a) Definitions. As used in this clause--

Postconsumer material means a material or finished product that has served its intended use and has been discarded for disposal or recovery, having completed its life as a consumer item. Postconsumer material is a part of the broader category of "recovered material."

Recovered material means waste materials and by-products recovered or diverted from solid waste, but the term does not include those materials and by-products generated from, and commonly reused within, an original manufacturing process.

(b) The Contractor, on completion of this contract, shall--

(1) Estimate the percentage of the total recovered material content for EPA-designated item(s) delivered and/or used in contract performance, including, if applicable, the percentage of post-consumer material content; and

(2) Submit this estimate to:

U.S. Army Corps of Engineers, Kansas City District
ATTN: David M. Best, CECT-NWK- C, Rm 647
Federal Building
601 E. 12th Street
Kansas City, Missouri 64106-2896

(End of clause)

52.225-9 BUY AMERICAN—CONSTRUCTION MATERIALS (OCT 2022)

(a) Definitions. As used in this clause--

Commercially available off-the-shelf (COTS) item—

(1) Means any item of supply (including construction material) that is--

(i) A commercial product (as defined in paragraph (1) of the definition of "commercial product" at Federal Acquisition Regulation (FAR) 2.101);

(ii) Sold in substantial quantities in the commercial marketplace; and

(iii) Offered to the Government, under a contract or subcontract at any tier, without modification, in the same form in which it is sold in the commercial marketplace; and

(2) Does not include bulk cargo, as defined in 46 U.S.C. 40102(4) such as agricultural products and petroleum products.

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.

Critical component means a component that is mined, produced, or manufactured in the United States and deemed critical to the U.S. supply chain. The list of critical components is at FAR 25.105.

Critical item means a domestic construction material or domestic end product that is deemed critical to U.S. supply chain resiliency. The list of critical items is at FAR 25.105.

Domestic construction material means--

(1) For construction material that does not consist wholly or predominantly of iron or steel or a combination of both--

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

(ii) A construction material manufactured in the United States, if--

(A) The cost of its components mined, produced, or manufactured in the United States exceeds 60 percent of the cost of all its components, except that the percentage will be 65 percent for items delivered in calendar years 2024 through 2028 and 75 percent for items delivered starting in calendar year 2029. Components of foreign origin of the same class or kind for which nonavailability determinations have been made are treated as domestic. Components of unknown origin are treated as foreign; or

(B) The construction material is a COTS item; or

(2) For construction material that consists wholly or predominantly of iron or steel or a combination of both, a construction material manufactured in the United States if the cost of foreign iron and steel constitutes less than 5 percent of the cost of all components used in such construction material. The cost of foreign iron and steel includes but is not limited to the cost of foreign iron or steel mill products (such as bar, billet, slab, wire, plate, or sheet), castings, or forgings utilized in the manufacture of the construction material and a good faith estimate of the cost of all foreign iron or steel components excluding COTS fasteners. Iron or steel components of unknown origin are treated as foreign. If the construction material contains multiple components, the cost of all the materials used in such construction material is calculated in accordance with the definition of "cost of components".

Fastener means a hardware device that mechanically joins or affixes two or more objects together. Examples of fasteners are nuts, bolts, pins, rivets, nails, clips, and screws.

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

Foreign iron and steel means iron or steel products not produced in the United States. Produced in the United States means that all manufacturing processes of the iron or steel must take place in the United States, from the initial melting stage through the application of coatings, except metallurgical processes involving refinement of steel additives. The origin of the elements of the iron or steel is not relevant to the determination of whether it is domestic or foreign.

Predominantly of iron or steel or a combination of both means that the cost of the iron and steel content exceeds 50 percent of the total cost of all its components. The cost of iron and steel is the cost of the iron or steel mill products (such as bar, billet, slab, wire, plate, or sheet), castings, or forgings utilized in the manufacture of the product and a good faith estimate of the cost of iron or steel components excluding COTS fasteners.

Steel means an alloy that includes at least 50 percent iron, between 0.02 and 2 percent carbon, and may include other elements.

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

(b) Domestic preference.

(1) This clause implements 41 U.S.C. chapter 83, Buy American, by providing a preference for domestic construction material. In accordance with 41 U.S.C. 1907, the domestic content test of the Buy American statute is waived for construction material that is a COTS item, except that for construction material that consists wholly or predominantly of iron or steel or a combination of both, the domestic content test is applied only to the iron and steel content of the construction materials, excluding COTS fasteners. (See FAR 12.505(a)(2)). 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 information technology that is a commercial product or to the construction materials or components listed by the Government as follows:

NONE [Contracting Officer to list applicable excepted materials or indicate "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.

(A) For domestic construction material that is not a critical item or does not contain critical components.

(1) The cost of a particular domestic construction material subject to the requirements of the Buy American statute is unreasonable when the cost of such material exceeds the cost of foreign material by more than 20 percent;

(2) For construction material that is not a COTS item and does not consist wholly or predominantly of iron or steel or a combination of both, if the cost of a particular domestic construction material is determined to be unreasonable or there is no domestic offer received, and the low offer is for foreign construction material that is manufactured in the United States and does not exceed 55 percent domestic content, the Contracting Officer will treat the lowest offer of foreign construction material that exceeds 55 percent domestic content as a domestic offer and determine whether the cost of that offer is unreasonable by applying the evaluation factor listed in paragraph (b)(3)(i)(A)(1) of this clause.

(3) The procedures in paragraph (b)(3)(i)(A)(2) of this clause will no longer apply as of January 1, 2030.

(B) For domestic construction material that is a critical item or contains critical components.

(1) The cost of a particular domestic construction material that is a critical item or contains critical components, subject to the requirements of the Buy American statute, is unreasonable when the cost of such material exceeds the cost of foreign material by more than 20 percent plus the additional preference factor identified for the critical item or construction material containing critical components listed at FAR 25.105.

(2) For construction material that does not consist wholly or predominantly of iron or steel or a combination of both, if the cost of a particular domestic construction material is determined to be unreasonable or there is no domestic

offer received, and the low offer is for foreign construction material that does not exceed 55 percent domestic content, the Contracting Officer will treat the lowest foreign offer of construction material that is manufactured in the United States and exceeds 55 percent domestic content as a domestic offer, and determine whether the cost of that offer is unreasonable by applying the evaluation factor listed in paragraph (b)(3)(i)(B)(1) of this clause.

(3) The procedures in paragraph (b)(3)(i)(B)(2) of this clause will no longer apply as of January 1, 2030.

(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 statute 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 statute applies, use of foreign construction material is noncompliant with the Buy American statute.

(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

Construction material description	Unit of measure	Quantity	Price (dollars) *\
Item 1:			
Foreign construction material....
Domestic construction material...
Item 2:			
Foreign construction material....
Domestic construction material...

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

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

[Include other applicable supporting information.]

(End of clause)

52.236-4 PHYSICAL DATA (APR 1984)

Data and information furnished or referred to below is for the Contractor's information. The Government shall not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

(a) The indications of physical conditions on the drawings and in the specifications are the result of site investigations.

(b) Weather conditions : Each bidder should satisfy himself/herself as to hazards likely to arise from weather conditions before submitting his/her bid. Complete weather records and reports may be obtained from the local National Weather Service Office.

(c) Transportation facilities : Each bidder should obtain necessary data as to access highway and railroad facilities before submitting his/her bid. The unavailability of transportation facilities shall not become a basis for claims for damages or extension of time for completion of work.

(End of clause)

52.236-26 PRECONSTRUCTION CONFERENCE (FEB 1995)

If the Contracting Officer decides to conduct a preconstruction conference, the successful offeror will be notified and will be required to attend. The Contracting Officer's notification will include specific details regarding the date, time, and location of the conference, any need for attendance by subcontractors, and information regarding the items to be discussed.

(End of clause)

52.242-14 SUSPENSION OF WORK (APR 1984)

(a) The Contracting Officer may order the Contractor, in writing, to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Contracting Officer determines appropriate for the convenience of the Government.

(b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of the Contracting Officer in the administration of this contract, or (2) by the Contracting Officer's failure to act within the time specified in this contract (or within a reasonable time if not specified), an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) necessarily caused by the unreasonable suspension, delay, or interruption, and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an equitable adjustment is provided for or excluded under any other term or condition of this contract.

(c) A claim under this clause shall not be allowed—

(1) For any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order); and

(2) Unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

(End of clause)

52.249-10 DEFAULT (FIXED-PRICE CONSTRUCTION) (APR 1984)

(a) If the Contractor refuses or fails to prosecute the work or any separable part, with the diligence that will insure its completion within the time specified in this contract including any extension, or fails to complete the work within this time, the Government may, by written notice to the Contractor, terminate the right to proceed with the work (or the separable part of the work) that has been delayed. In this event, the Government may take over the work and complete it by contract or otherwise, and may take possession of and use any materials, appliances, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the Government resulting from the Contractor's refusal or failure to complete the work within the specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the Government in completing the work.

(b) The Contractor's right to proceed shall not be terminated nor the Contractor charged with damages under this clause, if—

(1) The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include—

(i) Acts of God or of the public enemy,

(ii) Acts of the Government in either its sovereign or contractual capacity,

(iii) Acts of another Contractor in the performance of a contract with the Government,

- (iv) Fires,
- (v) Floods,
- (vi) Epidemics,
- (vii) Quarantine restrictions,
- (viii) Strikes,
- (ix) Freight embargoes,
- (x) Unusually severe weather, or
- (xi) Delays of subcontractors or suppliers at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and the subcontractors or suppliers; and

(2) The Contractor, within 10 days from the beginning of any delay (unless extended by the Contracting Officer), notifies the Contracting Officer in writing of the causes of delay. The Contracting Officer shall ascertain the facts and the extent of delay. If, in the judgment of the Contracting Officer, the findings of fact warrant such action, the time for completing the work shall be extended. The findings of the Contracting Officer shall be final and conclusive on the parties, but subject to appeal under the Disputes clause.

(c) If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been issued for the convenience of the Government.

(d) The rights and remedies of the Government in this clause are in addition to any other rights and remedies provided by law or under this contract.

(End of clause)

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. Also, the full text of a clause may be accessed electronically at this/these address(es):

<https://www.acquisition.gov/>

(End of clause)

252.236-7001 CONTRACT DRAWINGS AND SPECIFICATIONS (AUG 2000)

(a) The Government will provide to the Contractor, without charge, one set of contract drawings and specifications, except publications incorporated into the technical provisions by reference, in electronic or paper media as chosen by the Contracting Officer.

(b) The Contractor shall--

- (1) Check all drawings furnished immediately upon receipt;
 - (2) Compare all drawings and verify the figures before laying out the work;
 - (3) Promptly notify the Contracting Officer of any discrepancies;
 - (4) Be responsible for any errors that might have been avoided by complying with this paragraph (b); and
 - (5) Reproduce and print contract drawings and specifications as needed.
- (c) In general--
- (1) Large-scale drawings shall govern small-scale drawings; and
 - (2) The Contractor shall follow figures marked on drawings in preference to scale measurements.
- (d) Omissions from the drawings or specifications or the misdescription of details of work that are manifestly necessary to carry out the intent of the drawings and specifications, or that are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details of the work. The Contractor shall perform such details as if fully and correctly set forth and described in the drawings and specifications.
- (e) The work shall conform to the specifications and the contract drawings identified on the following index of drawings:

Title	File	Drawing No.
Cover and Index		G-001
Location and vicinity map		G-002
Overall Site Plan		G-003
Service Bridge electrical and communication lines relocation details		S-001
Rivet Inspection details		S-002
Inspection Details		S-003
Service Bridge Plan and Elevation		RS700
Service Bridge details of super structure		RS 701
Intake tower and service bridge electric service and exterior lighting		RS 702
(End of clause)		

Section 00 73 00 - Supplementary Conditions

WAGE RATESWAGE RATES

The inclusion of the Wage Rates Requirement (Construction) formerly known as Davis-Bacon Act General Wage Decision in the solicitation is a statutory requirement. It is not a representation by the U.S. Army Corps of Engineers that any specific work task can be performed by any specific trade. Which work tasks can be performed by what trades depends on and is determined by the prevailing area practice for the local area where the contract is being performed. It is the sole responsibility of the contractor to determine and comply with the prevailing area practice. Inquiries regarding a prevailing area practice should be directed to the Corps of Engineers, Contractor Industrial Relations Specialist (telephone number 816-389-2247) or to the U. S. Department of Labor Regional Wage and Hour Division.

The following current Davis Bacon Act wage determination are incorporated into this IFB by reference, and can be downloaded on the SAM.GOV website:

<https://sam.gov/wage-determination/KS20220037/3>

General Decision Number: KS20220037 Modification #3

All work required shall be considered Heavy Construction

“A hard copy of the applicable wage decision will be provided upon request.”

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SECTION 01 11 00

SUMMARY OF WORK
08/15

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Work Plan; G, DO

1.2 WORK COVERED BY CONTRACT DOCUMENTS

1.2.1 Project Description

1.2.1.1 Repainting of the Service Bridge Superstructure

The work includes complete removal of an existing lead based paint system on the steel superstructure of the bridge, the bearings and handrails, the cleaning and preparation of the metal surfaces, inspection of the complete bridge superstructure by a qualified individual(s), the furnishing, application and protection of the paint coatings, the protection from paint of all surfaces not to be painted, and repainting the bridge with a tested and approved paint system. The surfaces to be cleaned and painted shall include all surfaces of the steel work specified, electrical and communication conduits, and incidental related work.

The existing paint system is known to contain lead.

Contractor shall field verify the electrical and communication conduit locations, sizes and conductors prior to commencing work. Two electrical conduits and one communication line are currently hanging on the bottom chord of the truss and shall be temporarily relocated by the Contractor prior to paint removal and rehung in the original manner after completion of the work. All welding to the bridge is prohibited. Prior to reinstallation and painting of the conduit, remove existing rust and other loose material, sand the conduit, and coat with a direct-to-metal Acrylic Primer/Finish. Provide new stainless steel separation clamps, bolts and fasteners. Stainless steel separation clamps shall conform to ASTM A276/276M, Type 316. Stainless steel bolts and fasteners shall conform to ASTM F593, Type 316.

Temporary relocation of the electrical conductors and conduits is required to achieve good paint removal and new paint adherence to the bridge steel. Communication and electrical conduits supports shall remain and shall be included in the paint removal and reapplication. All power, security and communication signals to the tower must remain operational during construction and relocation of the electrical and communication conduit.

Temporary relocation and reinstallation of the electrical and communication lines is considered incidental related work. Do not disturb lightning protection unless otherwise approved by the government. Lightning protection must not be painted and shall be protected during paint application.

1.2.2 Location

The work is on the service bridge located near the Kanopolis Lake Project office in Ellsworth County, KS. The exact location is as shown in the Contract Drawings. The existing bridge drawings are also attached for information only.

1.3 WORK PLAN

Prepare a work plan describing the methods of paint removal, new paint application, bridge superstructure inspection plan, including access, methods, equipment and materials to be used for each feature. Submit the work plan for approval prior to the start of the work. The plan must include, but not be limited to, repair materials to be used with specific information on products and/or constituents, and requirements for handling, storage, etc., equipment to be used, surface preparation, and requirements for placement, finishing, curing and protection specific to the materials used. The work plan shall also include methods of controlling, collecting, and removing debris. Include a description of field demonstrations in the work plan. Do not commence work until the work plan and field demonstration representative of the type of work are approved.

Submit proposed work plan, repair methods, materials, and modifications to the work needed to correct rejected repair work to meet the requirements of the Contract Documents.

Required closures shall be coordinated with the Kanopolis Project staff and the COR prior to mobilization. Potential storage areas are as depicted in the Contract Drawings. Storage of materials on the bridge will require government approval.

1.4 Other Contract Work

Other contract work will be occurring simultaneously in the intake tower and areas around the service bridge during this project. Sequence of work shall be performed in a way that limits impacts to other Contractors, this project, and the operability of the intake tower. When conflicts arise, the COR shall determine the work that will take precedence. Access to the tower must be provided throughout construction to government personnel and other Contractors.

1.5 EXISTING WORK

In addition to FAR 52.236-9 Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements:

- a. Remove or alter existing work in such a manner as to prevent injury or damage to any portions of the existing work which remain.
- b. Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as approved by the Contracting Officer. At the completion of operations,

existing work must be in a condition equal to or better than that which existed before new work started.

1.6 LOCATION OF UNDERGROUND UTILITIES

Obtain digging permits prior to start of excavation, and comply with Installation requirements for locating and marking underground utilities. Contact local utility locating service a minimum of 48 hours prior to excavating, to mark utilities, and within sufficient time required if work occurs on a Monday or after a Holiday. Verify existing utility locations indicated on contract drawings, within area of work.

1.6.1 Notification Prior to Excavation

Notify the Contracting Officer at least 48 hours prior to starting excavation work.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

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PRICE AND PAYMENT PROCEDURES
08/15

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

1.2 SINGLE JOB PAYMENT ITEMS

Payment items for the work of this contract for which contract job payments will be made are listed in the BIDDING SCHEDULE and described below. All costs for items of work, which are not specifically mentioned to be included in a particular job or unit price payment item, are included in the listed job item most closely associated with the work involved. The job price and payment made for each item listed constitutes full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for which separate payment is not otherwise provided.

1.2.1 Blast/Paint Bridge Superstructure

1.2.1.1 Payment

Payment will be made for all costs related to sandblasting and painting the superstructure per the contract documents and inspection by a qualified bridge inspector. This also includes all mob and demob activities.

1.2.1.2 Unit of Measure: Job

1.2.2 River Replacement

1.2.2.1 Payment

Payment will be made for all costs related to the replacement of defective rivets with high strength bolts, washer, and nuts if the qualified bridge inspector determines that a rivet needs replaced.

1.2.2.2 Unit of Measure: Each

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 CONTRACT COST BREAKDOWN

The Contractor must furnish within 30 days after the date of Notice to Proceed, and prior to the submission of its first partial payment estimate, a breakdown of its single job pay item or items which will be reviewed by the Contracting Officer as to propriety of distribution of the total cost to the various accounts. Any unbalanced items as between early and late payment items or other discrepancies will be revised by the Contracting Officer to agree with a reasonable cost of the work included in the various items. This contract cost breakdown will then be utilized as the basis for progress payments to the Contractor.

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ADMINISTRATIVE REQUIREMENTS
11/20, CHG 2: 05/22

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2019) Safety and Health Requirements
Manual

1.2 IDENTIFICATION OF EMPLOYEES

The Contractor shall be responsible for furnishing to each employee and for requiring each employee engaged on the work to display identification as may be approved and directed by the Contracting Office. All prescribed identification shall immediately be delivered to the Contracting Officer, for cancellation upon the release of any employee. When required by the Contracting Officer the Contractor shall obtain and submit fingerprints of all persons employed or to be employed on the project.

1.3 ANTI-TERRORISM/OPERATION SECURITY REQUIREMENTS

All contractor and all associated subcontractors' employees shall comply with applicable installation, facility and area commander installation/facility access and local security policies and procedures (provided by government representative). The contractor shall also provide all information required for background checks to meet installation access requirements to be accomplished by installation Provost Marshal Office, Director of Emergency Services or Security Office. Contractor workforce must comply with all personal identity verification requirements as directed by DOD, HQDA and/or local policy. In addition to the changes otherwise authorized by the changes clause of this contract, should the Force Protection Condition (FPCON) at any individual facility or installation change, the Government may require changes in contractor security matters or processes.

All contractor and all associated sub-contractors employees will receive a CORPS Watch information paper (provided by the authorized government representative) and provide a written acknowledgement to the COR, no later than 30 calendar days after contract start date or effective date of incorporation of this requirement into the contract. The Contractor must pre-screen candidates using the E-verify Program (<http://www.dhs.gov/E-Verify>) website to meet the established employment eligibility requirements. The vendor must ensure that the candidate has two valid forms of government issued identification to ensure the correct information is entered into the E-verify system. An initial list of verified/eligible candidates must be provided to the COR no later than 3 business days after the initial contract award.

Per the E-Verify Website the following exemptions apply:

Employers whose contracts are exempt from the E-Verify federal contractor rule are not required to enroll in E-Verify. A contract is considered exempt if any one of the following applies: (1) It is for fewer than 120 days. (2) It is valued at less than \$150,000, the simplified acquisition threshold (Source: <http://www.uscis.gov/e-verify/federal-contractors/exemptions-and-exceptions>).

All contract employees, including subcontractor employees who are not in possession of the appropriate security clearance, will be escorted in areas where they may be exposed to classified and/or sensitive materials and/or sensitive or restricted areas.

1.3.1 PROJECT SECURITY

The gate to the bridge is locked during normal duty hours. The Contractor's on-site supervisor shall work with the Kanopolis Project Staff personnel for installation of a Contractor provided lock and locking it in sequence with other locks on the gate. An Employee Identification and Control Procedure shall be submitted for approval for identification and control of employees entering or leaving the project. The security of the Contractor's property and items furnished under this contract, until accepted, are the responsibility of the Contractor regardless of storage location and should have appropriate theft deterrent measures.

a. Identification of Contractor's Employees

The Contractor shall comply with the Project's security policy that requires everyone to have an Identification Badge. The Contractor shall furnish employees with government approved Identification badges. As a minimum, the following information shall be shown on the badges:

Name of Contractor
Name of Employee
Birth date
Weight
Hair Color
Eye Color

A photograph of each Contractor employee shall be displayed on the employee's badge. At all times, while working at the Project, the Contractor employee shall wear this ID card visibly. The Contractor shall submit a complete List of Personnel on Site, listing of all personnel and their titles that will be working on the project at the weekly Coordination Meeting. This listing shall be revised and resubmitted when personnel changes occur. The Contractor shall recover all badges from employees that will no longer be working at the site.

b. Physical and Cyber Security

The contractor shall be responsible for safeguarding all Government equipment, information and property provided for contractor use and copies of programming performed by Contractor. At the close of each work period, Government facilities, equipment, and materials shall be secured. The Contractor shall complete Government provided Cyber Security training, which includes a 34-slide powerpoint presentation at the end of this section.

c. Contractor's Personnel Background Investigation

A minimum of seven days prior to engaging in work, the Contractor shall submit, to the COR, a Background Investigation (BI) for each personnel requiring authorized unescorted access to the intake tower. The Contractor's personnel will only be allowed authorized unescorted physical access after the BI is submitted to and approved by the Government and the individual has taken the appropriate cyber security training.

Contractor's personnel shall not be on parole or have been convicted of a felony within the last seven years or be a foreign national. If a foreign national is designated by the Contractor as a Subject Matter Expert, the District Commander must approve their appointment and the Department of State must approve the background investigation (in addition to the NACI and PSIP requirements above). Foreign national background investigations may take 3-4 weeks longer to obtain than a NACI, therefore, the Contractor should plan accordingly. The Government reserves the right to screen any and all Contractor's personnel on security and to reject those who do not meet the qualifications.

The Contractor shall be responsible for identifying any foreign-born non-US citizen among his employees. The Contractor shall then submit this list of persons along with photocopies of their valid US driver's license and either passport or green card 30 days in advance of the expected date of the employee(s) beginning work at the Project. This information shall be submitted to the COR. These non-citizen employees will only be permitted to work at the Project after they have gone through security examination.

1.4 MINIMUM INSURANCE REQUIREMENTS

Provide the minimum insurance coverage required by FAR 28.307-2 Liability, during the entire period of performance under this contract. Provide other insurance coverage as required by Kansas law.

1.5 SUPERVISION

1.5.1 Minimum Communication Requirements

Have at least one qualified superintendent, or competent alternate, capable of reading, writing, and conversing fluently in the English language, on the job-site at all times during the performance of contract work. In addition, if a Quality Control (QC) representative is required on the contract, then that individual must also have fluent English communication skills.

1.5.2 Superintendent Qualifications

The project superintendent must have a minimum of 6 years experience in construction with at least 3 of those years as a superintendent on projects similar in size and complexity. The individual must be familiar with the requirements of EM 385-1-1 and have experience in the areas of hazard identification and safety compliance. The individual must be capable of interpreting a critical path schedule and construction drawings. The qualification requirements for the alternate superintendent are the same as for the project superintendent. The Contracting Officer may request proof of the superintendent's qualifications at any point in the project if the performance of the superintendent is in question.

1.5.2.1 Duties

The project superintendent is primarily responsible for managing and coordinating day-to-day production and schedule adherence on the project. The superintendent is required to attend partnering meetings, and quality control meetings. The superintendent or qualified alternative must be on-site at all times during the performance of this contract until the work is completed and accepted. The superintendent may also serve as the Quality Control (QC) Manager and Site Safety Health Officer (SSHO).

1.5.3 Non-Compliance Actions

The Project Superintendent is subject to removal by the Contracting Officer for non-compliance with requirements specified in the contract and for failure to manage the project to insure timely completion. Furthermore, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders is acceptable as the subject of claim for extension of time for excess costs or damages by the Contractor.

1.6 PRECONSTRUCTION CONFERENCE

After award of the contract but prior to commencement of any work at the site, meet with the Contracting Officer to discuss and develop a mutual understanding relative to the administration of the value engineering and safety program, preparation of the schedule of prices or earned value report, shop drawings, and other submittals, scheduling programming, prosecution of the work, and clear expectations of the "Interim DD Form 1354" Submittal. Major subcontractors who will engage in the work must also attend.

1.7 PARTNERING

To most effectively accomplish this contract, the Government requires the formation of a cohesive partnership within the Project Team whose members are from the Government, the Contractor and their Subcontractors. Key personnel from the Supported Command, the End User (who will occupy the facility), the Government Design and Construction team and Subject Matter Experts, the Installation, the Contractor and Subcontractors, and the Designer of Record will be invited to participate in the Partnering process. The Partnership will draw on the strength of each organization in an effort to achieve a project that is without any safety mishaps, conforms to the Contract, and stays within budget and on schedule.

The Contracting Officer will provide Information on the Partnering Process and a list of key and optional personnel who should attend the Partnering meeting.

1.7.1 Informal Partnering

The Contracting Officer will organize the Partnering Sessions with key personnel of the project team, including Contractor personnel and Government personnel.

The Initial Partnering session should be a part of the Pre-Construction Meeting. Partnering sessions will be held at a location agreed to by the Contracting Officer and the Contractor (typically a conference room provided by the Resident Engineer office or the Contractor). The Initial

Informal Partnering Session will be conducted and facilitated using electronic media (a video and accompanying forms) provided by the Contracting Officer. The Partners will determine the frequency of the follow-on sessions, at no more than 3 to six month intervals.

1.8 COORDINATION BETWEEN CONTRACTORS

See CONTRACT CLAUSE 52.236-8 Other Contracts, in Section 00 72 00 of this contract.) Construction work on another contract is underway concurrently with this Contract. The obligations of the Contractor under this Contract will include jointly planning and scheduling the work, on a cooperative basis, with the other Contractor involved in order to minimize delays and interferences. Alterations to systems installed under the other contract, including connections to sewer, waterlines, and bituminous pavement shown as existing, may not be in place.

1.9 ELECTRONIC MAIL (E-MAIL) ADDRESS

Establish and maintain electronic mail (e-mail) capability along with the capability to open various electronic attachments as text files, pdf files, and other similar formats. Within 10 days after contract award, provide the Contracting Officer a single (only one) e-mail address for electronic communications from the Contracting Officer related to this contract including, but not limited to contract documents, invoice information, request for proposals, and other correspondence. The Contracting Officer may also use email to notify the Contractor of base access conditions when emergency conditions warrant, such as hurricanes or terrorist threats. Multiple email addresses are not allowed.

It is the Contractor's responsibility to make timely distribution of all Contracting Officer initiated e-mail with its own organization including field office(s). Promptly notify the Contracting Officer, in writing, of any changes to this email address.

1.10 PAYMENTS TO CONTRACTOR

The following is an example of a Contractor's release of claims clause required to comply with the final payment provisions of paragraph (h) of the CONTRACT CLAUSE 52.232-5 Payments Under Fixed-Price Construction Contracts in Section 00 72 00 of this contract:

RELEASE OF CLAIMS

The undersigned Contractor, under Contract Number, {_____} dated {_____} between the United States of America and said Contractor for {Contract Title/description} at _____ hereby releases the United States, its officers, agents and employees from any and all claims arising under or by virtue of said contract, any modification or change thereof, or rights or remedies (including, but not limited to, additional costs, interest, penalties, attorneys' fees or consultants' fees) provided by statute, regulation or other law as they may relate to the enforcement of rights originally arising under the referenced contract.

(Date) Contractor's name exactly as shown on the face of the Contract

By: _____

Title: _____

1.11 WORK HOURS

1.11.1 Working Hours

Working hours for this project will be limited to Monday through Friday, 7:00 a.m. to 4:00 p.m., except as follows: Work will not be permitted on weekends and Federal holidays. In unusual circumstances, such as when utility turn-off is required for an extended period of time, authorization for weekend or holiday work may be requested from the Contracting Officer; these instances must be coordinated well in advance, in writing. Short duration work which will disrupt normal operations or traffic flow must be scheduled at least **14** working days in advance with the Contracting officer and may require schedule changes to ensure that safety is maintained.

1.12 KANSAS SALES AND USE TAX

In accordance with FAR clause 52.229-3, notice is given that the contract price excludes the Kansas sales tax and compensating (use) tax on all sales of tangible personal property and materials purchased by the Contractor or subcontractors for the construction of projects, including repairing or remodeling facilities, for the United States. In accordance with Kan. Stats. Anno., sec. 79-3606(e), the Contracting Officer will obtain from the State and furnish to the Contractor an exemption certificate for this project for use by the Contractor and subcontractors in the purchase of materials for incorporation in the project and of services. The Contractor and the subcontractors shall furnish the number of such certificates to all suppliers from whom such purchases are made, and the suppliers shall execute invoices covering the same bearing the number of such certificate. The Contractor is required to retain all invoices for a period of five (5) years during which time these invoices are subject to audit by the Kansas Director of Taxation. Upon completion of the project, the Contractor shall complete the Project Completion Certification (Form PR 77) in duplicate returning one copy to the Contracting Officer, and forwarding the other to the Kansas Director of Taxation. (KCD 12/09)

1.13 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER

- a. This provision specifies the procedure for determination of time extensions for unusually severe weather in accordance with the CONTRACT CLAUSE 52.249-10 Default (Fixed Price Construction) in Section 00 72 00 of this Contract. In order for the Contracting Officer to award a time extension under this clause, the following conditions must be satisfied:
 - (1) The weather experienced at the project site during the contract period must be found to be unusually severe, that is, more severe than the adverse weather anticipated for the project location during any given month.
 - (2) The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the Contractor.
- b. The following schedule of monthly anticipated adverse weather delays is based on National Oceanic and Atmospheric Administration (NOAA) or

similar data for the project location and will constitute the base line for monthly weather time evaluations. The project schedule shall include these anticipated adverse weather delay days in the durations of all weather-sensitive activities throughout the original contract duration. This shall be accomplished by creating a "weather calendar" within the project schedule and then assigning this calendar to each weather-sensitive activity. This weather calendar shall contain the applicable number of anticipated adverse weather delay days as non-work days, distributed evenly throughout each month of the original contract duration. After the original contract completion date, the weather calendar shall not contain any anticipated adverse weather delay days.

MONTHLY ANTICIPATED ADVERSE WEATHER DELAY

WORK DAYS BASED ON (5) DAY WORK WEEK*

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
(8)	(6)	(4)	(5)	(6)	(6)	(5)	(4)	(3)	(4)	(3)	(6)

- c. Upon acknowledgment of the Notice to Proceed (NTP) and continuing until the work is complete, the Contractor shall record on the daily CQC report, the occurrence of adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical path activities for 50 percent or more of the Contractor's scheduled work day. Within ten days of the following month, the Contractor shall provide in writing a list of their proposed dates of the actual adverse weather delay days for each month. The number of actual adverse weather delay days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month), be calculated chronologically from the first to the last day of each month, and be recorded as full days. If the number of actual adverse weather delay days exceeds the number of days anticipated in paragraph (b), above, the Contracting Officer will convert any qualifying delays to calendar days and issue a modification in accordance with the Contract Clause entitled "Default (Fixed Price Construction)". After the original contract completion date has passed, adverse weather that causes delay to the completion of the project will be granted day-for-day without deducting anticipated adverse weather delay days and will be converted from work days to calendar days.

* Monthly anticipated weather delay days shall be adjusted proportionally if work is scheduled to be performed in a work week with greater than or less than a five-day work week. The following formula shall be used to adjust the monthly anticipated weather delays:

Adjusted monthly anticipated weather delays = **A** multiplied by (**B** divided by **C**); where

A = The monthly anticipated adverse weather delay for a particular month based on a five-day work week.

B = The actual average number of days work is scheduled to be performed in a work week during that particular month.

C = The number five (5).

for example, If the monthly anticipated adverse weather delay for January based on a five day work week is 10 days, but the Contractor actually scheduled an average of a six-day work week for that month, the monthly anticipated weather delay would be adjusted by applying the above formula as follows: $10 \times (6/5) = 12$ days.

* Monthly anticipated weather delay days shall also be adjusted proportionally for those situations involving a fractional part of a month. Some examples are the month Notice to Proceed is acknowledged and the month of the original contract completion date. The following formula shall be used to adjust the monthly anticipated weather delays:

Adjusted monthly anticipated weather delays = **D** multiplied by (**E** divided by **F**); where

D = The monthly anticipated adverse weather delay for a particular month.

E = The number of calendar days during that fractional part of a particular month.

F = The number of calendar days in that particular month.

for example, The monthly anticipated adverse weather delay for the particular month is 9 days. The original contract completion date is on the twentieth (20th) day of a thirty (30) day month. The monthly anticipated adverse weather delay would be adjusted by applying the above formula as follows:

$$9 \times (20/30) = 6 \text{ days.}$$

1.14 PERFORMANCE OF WORK BY CONTRACTOR

Bidder's attention is directed to FAR Clause 52.219-14 "Limitations on Subcontracting". The successful bidder will be required to furnish the Contracting Officer, a description of the work which he will perform with his own organization (e.g., earthwork, paving, etc.), the percentage of the total work this represents, and the estimated cost thereof. Such description of work to be performed by the Contractor's own organization shall be furnished to the Contracting Officer within 10 days after award of the contract.

1.15 PROFIT

a. Weighted Guidelines

Weighted guidelines method of determining profit shall be used on any equitable adjustment change order or modification issued under this contract. The profit factors, expressed as percent, shall be as follows:

<u>Factor</u>	<u>Rate</u>	<u>Weight</u>	<u>Value</u>
Degree of Risk	20		

<u>Factor</u>	<u>Rate</u>	<u>Weight</u>	<u>Value</u>
Relative Difficulty of Work	15		
Size of Job	15		
Period of Performance	15		
Contractor's Investment	5		
Assistance by Government	5		
Subcontracting	<u>25</u>		
	100	Profit %	

- b. Based on the circumstances of the procurement action, each of the above factors shall be weighted from 0.03 to 0.12 as indicated below. "Value" shall be obtained by multiplying the rate by the weight. The Value column when totaled indicates the fair and reasonable profit percentage under the circumstances of the particular procurement.
- c. Degree of risk. Where the work involves no risk or the degree of risk is very small, the weighting should be 0.03; as the degree of risk increases, the weighting should be increased up to a maximum of 0.12. Lump sum items shall generally have a higher weight than unit price items. Consider the nature of the work and where it is to be performed. Also consider the portion of the work to be done by subcontractors, amount and type of labor included in costs and whether the negotiation is before or after performance of the work. Modifications settled before the fact have much greater risk than those settled after the fact. A weight of 0.03 is appropriate for after the fact equitable adjustments and/or settlements.
- d. Relative Difficulty of Work. If the work is difficult and complex, the weight should be 0.12 and should be proportionately reduced to 0.03 on the simplest of jobs. This factor is tied in to some extent with the degree of risk. Other things to consider are the nature of the work, by whom it is to be done (i.e., subcontractors, consultants), etc.
- e. Size of Job. Work of \$100,000 shall be weighted at 0.12. Work estimated between \$100,000 and \$5,000,000 shall be proportionately weighted from 0.12 to 0.05. Work from \$5,000,000 to \$10,000,000 shall be weighted at 0.04. Work in excess of \$10,000,000 shall be weighted at 0.03. It should be noted that control of fixed expenses generally improves with increased job magnitude.
- f. Period of Performance. Work not to exceed 1 month is to be proportionately weighted at 0.03. Durations between 1 and 24 months are to be proportionately weighted between 0.03 and 0.12. Work in excess of 24 months is to be weighted at 0.12.
- g. Contractor's Investment. To be weighted from 0.03 to 0.12 on the basis of below average, average and above average. Consider the amount of subcontracting, Government furnished property or data such as surveys, method of making progress payments, and any mobilization payment items.

- h. Assistance by Government. To be weighted from 0.12 to 0.03 on the basis of average to above average. Consider use of Government owned property, equipment and facilities, expediting assistance, etc.
- i. Subcontracting. To be weighed inversely proportional to the amount of subcontracting. Where 80% or more of the work is to be subcontracted use 0.03. The weighting should be increased proportionately to 0.12 where all the work is performed by the contractor's own forces.

1.16 VETERANS EMPLOYMENT EMPHASIS FOR U.S. ARMY CORPS OF ENGINEERS CONTRACTS

In addition to complying with the requirements outlined in FAR Part 22.13, FAR Provision 52.222-38, FAR Clause 52.222-35, FAR Clause 52.222-37, DFARS 222.13 and Department of Labor regulations, U.S. Army Corps of Engineers (USACE) contractors and subcontractors at all tiers are encouraged to promote the training and employment of U.S. veterans while performing under a USACE contract. While no set-aside, evaluation preference, or incentive applies to the solicitation or performance under the resultant contract, USACE contractors are encouraged to seek out highly qualified veterans to perform services under this contract. The following resources are available to assist USACE contractors in their outreach efforts:

Federal Veteran employment information at
<http://www.fedshirevets.gov/index.aspx>

Department of Labor Veterans Employment Assistance <http://www.dol.gov/vets/>

Department of Veterans Affairs-VOW to Hire Heroes Act
<http://benefits.va.gov/vow/>

Army Wounded Warrior Program
<http://wtc.army.mil/modules/employers/index.html>

U.S. Chamber of Commerce Foundation-Hiring Our Hero's
<http://www.hiringourheroes.org/>

Guide to Hiring Veterans - Reference Material
https://www.whitehouse.gov/sites/default/files/docs/white_house_business_council_-_guide_to_hiring_veterans_0.pdf

1.17 LAYOUT OF WORK

- a. The Government has established bench marks and horizontal control points at the site of the work. These are described and indicated on contract drawings.
- b. From these control points the Contractor shall lay out the work by establishing all lines and grades at the site necessary to control the work and shall be responsible for all measurements that may be required for the execution of the work to the location and limit marks prescribed in the specifications or on the contract drawings. All survey data shall be recorded in accordance with standard and approved methods. All field notes, sketches, recordings and computations made by the Contractor in establishing control points shall be available at all times during the progress of the work for ready examination by the Contracting Officer or his representative.
- c. The Contractor shall furnish, at his own expense, all such stakes,

spikes, steel pins, templates, platforms, equipment, tools, and material and all labor as may be required in laying out any part of the work from the control points established by the Government. It shall be the responsibility of the Contractor to maintain and preserve all stakes and other markers established by him until authorized to remove them. The Contractor shall be responsible for maintaining all boundary markers established by the Government. If any of the control points established at the site by the Government are destroyed by or through the negligence of the Contractor, they shall be replaced by the Contractor at his expense. The Contracting Officer may require that work be suspended at any time when horizontal and vertical control points established at the site by the Contractor are not reasonably adequate to permit checking the work. Such suspension will be withdrawn upon proper replacement of the control points.

1.18 DAMAGE TO WORK

The responsibility for damage to any part of the permanent work shall be as set forth in the CONTRACT CLAUSE 52.236-7 Permits and Responsibilities in Section 00 72 00 of this Contract. However, if, in the judgment of the Contracting Officer, any part of the permanent work performed by the Contractor is damaged by flood or earthquake, which damage is not due to the failure of the Contractor to take reasonable precautions or to exercise sound engineering and construction practices in the conduct of the work, the Contractor will make the repairs as ordered by the Contracting Officer and full compensation for such repairs will be made at the applicable contract unit or lump sum prices as fixed and established in the contract. If, in the opinion of the Contracting Officer, there are no contract unit or lump sum prices applicable to any part of such work an equitable adjustment pursuant to CONTRACT CLAUSE 52.243-4 Changes in Section 00 72 00 of this Contract, will be made as full compensation for the repairs of that part of the permanent work for which there are no applicable contract unit or lump sum prices. Except as herein provided, damage to all work (including temporary construction), utilities, materials, equipment and plant shall be repaired to the satisfaction of the Contracting Officer at the Contractor's expense, regardless of the cause of such damage.

1.19 DIFFERENCES IN DRAWINGS

In addition to the provisions of CONTRACT CLAUSE paragraph "Specifications and Drawings for Construction," the structural drawings shall govern in cases where they differ from the architectural drawings.

1.20 CONSTRUCTION EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE

Whenever a modification or equitable adjustment of contract price is required, the Contractor's cost proposal for equipment ownership and operating expenses shall be as set forth in UAI 31.105-100 Construction and A-E Contracts. In accordance with FAR 31.105(d)(2)(i)(b), equipment ownership and operating costs shall be determined using EP 1110-1-8, "Construction Equipment Ownership and Operating Expense Schedule". A current copy of EP 1110-1-8 "Construction Equipment Ownership and Operating Expense Schedule" can be ordered from the Government Printing Office (GPO) by calling Telephone No. 202-512-1800.

1.21 SAFETY REQUIREMENTS

1.21.1 Compliance with Occupational Safety and Health Act (OSHA)

The Contractor shall comply with OSHA standards as well as the edition in effect at the time of the solicitation of the Corps of Engineers General Safety Requirements Manual (EM 385-1-1). The OSHA standards are subject to change and such changes may affect the Contractor in his performance under the contract. It is the Contractor's responsibility to know such changes and effective dates of changes.

1.22 CONTRACTOR-FURNISHED EQUIPMENT DATA

At or before 30 days prior to final inspection and acceptance of the work, the Contractor shall submit the data mentioned in the following sub clauses.

- a. Equipment List. An itemized equipment list showing unit retail value and nameplate data including serial number, model number, size, manufacturer, etc., for all Contractor-furnished items of mechanical equipment, electrical equipment, and fire protection systems installed under this contract.
- b. Guarantees. A list of all equipment items which are specified to be guaranteed accompanied by a copy of each specific guarantee therefor. For each specific guaranteed item, a name, address, and telephone number shall be shown on the list for subcontractor who installed equipment, equipment supplier or distributor and equipment manufacturer. The completion date of the guarantee period shall correspond to the applicable specification requirements for each guaranteed item.
- c. Warranty Service Calls. The Contractor shall furnish to the Contracting Officer the names of local service representatives and/or Contractors that are available for warranty service calls and who will respond to a call within the time periods as follows: 4 hours for heating, air-conditioning, refrigeration, air supply and distribution, and critical electrical service systems and food service equipment, and 24 hours for all other systems. The names, addresses, and telephone numbers for day, night, weekend, and holiday service responses shall be furnished to the Contracting Officer and also posted at a conspicuous location in each mechanical and electrical room or close to the unit.

1.23 AS-BUILT REQUIREMENTS

If there is no separate contract line item (CLIN) for as-built drawings, cost load the "Submission and approval of as-built drawings" activity not less than \$35,000 or 1 percent of the present contract value, whichever is greater, up to \$200,000. Activity will be declared 100 percent complete upon the Government's approval. Refer to Section 01 78 00 CLOSE-OUT SUBMITTALS for additional requirements.

1.23.1 Payment Withholding

If there is no separate contract line item (CLIN) for as-built drawings, the Government will withhold the amount of \$35,000 or 1% of the present construction value, whichever is greater, until the final as-built drawing submittal has been approved by the Government.

1.24 SURVEY INFORMATION

1.24.1 Quantity Surveys Using Drawing Finish Lines Where the TECHNICAL PROVISIONS provide for using the finish lines on drawings as the final lines for quantity measurement purposes, the Contractor shall, in addition to the requirements set forth in CONTRACTCLAUSE paragraph titled "Quantity Surveys", make final surveys at least at all locations (stations) where the Contractor performed original surveys.

1.25 WORK ADJACENT TO ROADS AND HIGHWAYS

Where the construction work is on or adjacent to, or involves hauling over public or private roads, streets, or highways, all herein referred to as "roads," the said roads shall, except as otherwise specified or directed, be kept open for traffic at all times during the construction period. Further, the Contractor shall, during said construction, provide, erect and maintain warning signs, lanterns or torches or other safety devices and, when necessary, provide flagmen for protection of traffic to the satisfaction of the Contracting Officer and local authorities. The Contractor shall keep the right-of-way of the roads free of debris that might be caused to accumulate thereon by his operations, and upon completion of the work, shall clean up the said roads and repair any damage to the roads occasioned by his operations under this contract to the satisfaction of the Contracting Officer and local authorities having jurisdiction. The drainage from the roads shall not be obstructed by the construction work. The Contractor shall be responsible for obtaining and paying for all permits required for operation on all roads.

1.26 ENVIRONMENTAL REQUIREMENTS

1.26.1 Secondary Containment

All petroleum, oil, lubricants, hazardous materials, and hazardous wastes in 55-gallon containers or larger must have secondary containment capable of holding at least 110% of the capacity of the single largest container. This also applies to animal-based and vegetable-based grease commonly associated with dining facilities.

1.26.2 Rinsate

Concrete trucks may be washed out only in designated areas that have been approved for collecting spent material. The designated area must be located to prevent contaminated runoff from discharging from the site.

1.27 HAZARDOUS SUBSTANCES

1.27.1 Unexpected Hazardous Substances

In the event that suspected hazardous substances are revealed during construction activities, all such construction activities in the immediate area shall be immediately suspended. Hazardous substances for purposes of this specification only, shall be defined as Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) hazardous substances, infectious or radioactive wastes, asbestos or oil. The Contractor shall leave the materials undisturbed and shall immediately report the find to the Contracting Officer's Representative (COR) so that proper authorities can be notified. The Contractor shall not resume construction activities in the vicinity of the suspected hazardous substances until written clearance is received from the COR. Identification and removal of any such

materials will be conducted in accordance with all Federal, state and local environmental laws and regulations according to the CONTRACT CLAUSE titled "Differing Site Conditions."

1.27.2 Unexpected Discovery of Asbestos on Construction (Renovation and Demolition)

The buildings and areas to be renovated or demolished have been surveyed for the presence of asbestos-containing materials. This survey is not a warranty that asbestos-containing materials are either not present or limited to the amounts found in the survey. Should suspected asbestos-containing material be encountered, the Contractor shall promptly, and before the conditions or the substance encountered is disturbed, give a written notice to the Contracting Officer of the suspected asbestos-containing material conditions encountered. As directed by the Contracting Officer, the Contractor shall remove and dispose of any and all asbestos-containing material as necessary to accomplish the required work which shall be performed in accordance with all pertinent local, state, and federal laws. An equitable adjustment will be made to the Contractor in accordance with the CONTRACT CLAUSE entitled "Changes", for the additional work directed by the Contracting Officer.

1.28 CONTROL TOWER ACCESS DURING CONSTRUCTION

The Service Bridge provides the only means of access to the Control Tower which houses the flood control gates. During the Fall, Winter, and Spring seasons, the Government will need to enter the tower approximately 2 times per week and periodically during the Summer months.

The Government will notify the Contractor a minimum of four (4) hours prior to needing access to the control tower by 0800 hrs on the day of the request. Upon receiving the notification, the Contractor shall make the bridge accessible for Government personnel for the remainder of the day or until work is completed inside the tower.

In the unlikely event of a dam safety emergency, the Government may provide little to no notice before accessing the bridge.

The Government will make every effort to maximize the notification time to the Contractor when access to the tower is needed.

1.29 FIELD OFFICE OVERHEAD (FOOH) ACCOUNTING METHOD

NOTICE TO OFFERORS: Offerors will have to declare below the single accounting practice that you will apply to this contract to calculate field office overhead for all change orders, modifications, and requests for equitable adjustment. Pursuant to Federal Acquisition Regulations (FAR) Parts 31.105(d)(3) and 31.203(c), an accounting practice that varies from modification to modification is not allowed. Select one of the following:

1. TIME DISTRIBUTION BASE FOR A PER DIEM RATE _____
See Field Office Overhead Per Diem Rate" paragraph below for more information on this accounting practice.

2. DIRECT COST DISTRIBUTION BASE FOR A PERCENTAGE MARKUP _____
See Field Office Overhead Percentage Markup" paragraph below for more information on this accounting practice.

3. OTHER ACCOUNTING PRACTICE THAT IS ALLOWABLE _____

UNDER THE FAR AND THAT USES A SINGLE DISTRIBUTION BASE

If you choose 3, you must describe the accounting practice in sufficient detail below to allow the contracting officer to determine what account practice is being utilized by your company and that it complies with the FAR.

1.29.1 Field Office Overhead Per Diem Rate

If any change to the contract, issued pursuant to the Changes Clause or otherwise, for which the Government is responsible, causes an increase or decrease in the Contractor's cost of, or the time required for, performance under the contract, the Contracting Officer shall make an equitable adjustment and modify the contract in writing.

Under such equitable adjustment, no percentage markup for field office overhead shall be allowed. Additionally, no payment of field office overhead shall be allowed for any changes when the completion of the contract is not extended by reason of the change, except the Contractor may be reimbursed any variable expense it incurs due to the change, provided it can substantiate the variables. The Contractor shall be reimbursed for field office overhead using only a per diem basis when the completion of the contract is extended by reason of the change issued under any clause except the Default clause. Equitable adjustment shall be made for the costs that are incurred or are to be incurred due to the change. The Contractor shall provide a detailed breakdown of its proposed increase or decrease of costs as required by Contract Clause DFARS 252.236-7000 MODIFICATION OF PROPOSALS - PRICE BREAKDOWN.

1.29.2 Field Office Overhead Percentage Markup

If any change to the contract issued pursuant to the changes Clause, or otherwise, for which the Government is responsible, causes an increase or decrease in the Contractor's cost, or in the time required for performance under the contract, the Contracting Officer shall make an equitable adjustment and modify the contract in writing.

Under such equitable adjustment, no per diem rate for field office overhead shall be allowed in such a case, payment of field office overhead shall be allowed for any change using only a percentage markup basis regardless of whether the completion of the contract is or is not extended by reason of the change, except for modifications issued pursuant to the Default Clause. The Contractor shall provide a detailed breakdown of its proposed increase or decrease of costs as required by Contract Clause DFARS 252.236-7000 MODIFICATION OF PROPOSALS - PRICE BREAKDOWN.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

KA REPAINT SERVICES BRIDGE SUPERSTRUCTURE
Smoky Hill, KS

W912DQ23B1002

ATTACHMENTS

CIVIL AS-BUILT INSTRUCTIONS

ACCIDENT PREVENTION PLAN

QUALITY CONTROL PLAN

ENVIRONMENTAL PROTECTION PLAN

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Accident Prevention Plan

Contractor Name

Contract Name:

Contract Number:

To all employees:

Re: Company Safety Program

Attached is a copy of this company's safety program. We are required by law to enforce these rules and regulations. You are expected to read this manual and to abide by these rules. When you have finished reading this, you will see that these rules are really just common sense practices that are already in use.

These practices will result in a safer job site for you and your fellow workers.

This company is committed to providing a safe work environment for all employees and we ask for your cooperation.

Table of Contents

- A. Signature Sheet: Name, title, and signature of the following people:
 - a. Plan preparer (Qualified Person (QP), i.e. corporate safety staff person, QC)
 - b. Plan approver (owner, company president, regional vice president) (HTRW activities require approval of a Certified Industrial Hygienist, a Certified Safety Professional may approve the plan for operations involving UST removal where contaminants are known to be petroleum, oils, or lubricants)
 - c. Plan concurrence (e.g. Chief of Operations, Corporate Chief of Safety, Corporate Industrial Hygienist, project manager or superintendent, project safety professional, project QC)

- B. Background Information: List the following:
 - a. Contractor
 - b. Contract Number
 - c. Project Name
 - d. Brief Project Description
 - e. Location of the Project on a map
 - f. Contractor Accident Experience (Copy of OSHA 300 form)
 - g. List of Phases of Work and Hazardous Activities Requiring an Activity Hazard Analysis (AHA)

- C. Statement of Safety and Health Policy: Include a copy of the corporate safety policy. (The corporate policy statement may provide a portion of the information required by the APP.)

- D. Responsibilities and Lines of Authorities: Provide the following:
 - a. Identification and job responsibilities of personnel responsible for safety, both at the corporate and project level, and their resumes
 - b. Lines of authority

- E. Training:
 - a. List of subjects to be discussed with employees at safety indoctrination
 - b. List of mandatory training and certifications applicable to this project and any requirements for periodic retraining/recertification
 - c. Identity requirements for emergency response training
 - d. Outline requirements for supervisory and employee safety

- F. Safety and Health Inspections
 - a. Names of individuals responsible for conducting safety inspections (e.g. PM, safety professional, QC, supervisors, employees)
 - b. Proof of inspectors qualifications/training
 - c. When inspections will be conducted
 - d. Sample inspection forms
 - e. Deficiency tracking system
 - f. Names of competent/qualified persons and proof of competency/qualification
 - g. External inspections/certifications required

- G. Safety and Health Expectations, Incentive Programs, and Compliance
 - a. Safety program goals, objectives, and accident experience goals
 - b. Company safety incentive programs
 - c. Policies and procedures regarding noncompliance

- d. Procedures for holding managers and supervisors responsible for safety
- H. Mishap Reporting
 - a. How, when, and who shall complete exposure data
 - b. How, when, and who shall complete mishap investigations, reports, and logs
 - c. How, when, and who shall make immediate notifications of major mishaps
- I. Plans, programs, and procedures required by the Safety Manual
- J. Risk Management Processes

Accident Prevention Plan (IAW EM 385-1-1, Appendix A)

Signature Sheet

Plan Preparer

Plan Approver

Plan Concurrence

(Signature and Date)

(Signature and Date)

(Signature and Date)

(Printed Name)

(Printed Name)

(Printed Name)

(Title)

(Title)

(Title)

Section B: Background Information

- a. Contractor's Name:
- b. Contract Number:
- c. Project Name:
- d. Brief Project Description:
- e. Location of Project on a Map:

(Insert Map)

- f. Contractor Accident Experience (Copy of OSHA 300 Form)

(Insert Copy of OSHA 300 Form)

- g. List of Phases of Work and Hazardous Activities Requiring AHAs

(Insert Phases of Work and Hazardous Activities List)

Section C: Safety and Health Policy Statement

The following is the Safety and Health Policy Statement of (Contractor Name).

(Insert Safety and Health Policy)

Section D: Responsibilities and Lines of Authorities

Responsibilities of (Contractor Name).

According to OSHA, (Contractor Name) is required to provide a place of employment free of hazards which may cause illness, injury or death to employees. This requirement includes the necessity of seeing that each employee has whatever protective equipment is required by the law.

We are required to comply with standards, rules, and regulations adopted by the Secretary of Labor. Ignorance of these standards is not a defense.

Our responsibility lies in posting notices which inform employees of their rights and duties as outlined by the law. If a citation is levied against us, a copy of that citation must be posted where the violation occurred.

The SSHO, (Person's Name), has completed the OSHA 30-hour course or equivalent course areas as listed below:

<u>Course</u>	<u>Date</u>
OSH Act/General Duty Clause:	
29 CFR 2904 Recordkeeping:	
Subpart C: General Safety and Health Provisions Competent Person:	
Subpart D: Occupational Health and Environmental Controls, Citations	

And Safety Programs:

Subpart E: PPE, types and requirements
For use

Subpart F: Understanding Fire
Protection in the workplace

Subpart K: Electrical

Subpart M: Fall Protection
Rigging, welding and cutting, scaffolding
Excavations, concrete and masonry, demolition
Or any others that are applicable to the work
being performed.

Safety Roles and Responsibilities by Position

Employees:

The responsibility for employee health and safety rests with the individual employees. It is a condition of employment for all employees to maintain and safe workplace, and to conduct their work in a safe and healthy manner. Each employee shall follow, as mandated by federal, state, and local laws, codes and standards, the following good safety practices:

(Insert Employee Safety Practices)

Foreman/Crew Leaders:

The foreman/crew leader shall be held responsible for the implementation and enforcement of the Health and Safety Program for/on all assignments/jobs that they are responsible to perform. They shall also be held responsible for the overall safety of the employees under their supervision. The foreman/crew leader shall set the example by complying with all aspects of the Health and Safety Plan, and by performing all duties in a safe manner. The foreman/crew leader shall also do the following:

(Insert Crew Lead Safety Practices)

Project Superintendent:

As Project Superintendent, (Person's Name) has the full responsibility to implement, direct, and enforce the Health and Safety Program of/on the project that they are responsible for. The Project Superintendent shall:

(Insert Superintendent Safety Practices)

Corporate Safety Manager:

(Person's Name), as the Corporate Safety Manager, shall:

(Insert Corporate Safety Practices)

Executive Management:

Executive management for (Contractor Name) shall perform the following in order to promote and ensure a safe working environment:

(Insert Executive Management Safety Practices)

It is the policy of (Contractor Name) that safety is the responsibility of every employee. The managers and supervisors of (Contractor Name) are ultimately responsible for the health and safety of the employees. Managers and supervisors shall be held responsible for any unsafe actions taken by employees while on the job site.

(Contractor Name)'s Safety Lines of Authority are depicted below:

Section E: Training

All new hires will receive the following SOH orientation training at the time of initial hire. No employee shall be allowed to begin work on the job site without completing the required orientation training.

(Insert Orientation Training Topics)

All mandatory training and certifications applicable to this project are attached in appendix __.

(Contractor Name) shall conduct the following emergency response training at the time intervals defined. Emergency response training shall cover the following topics:

(Insert Emergency Response Training Info)

(Person's Name) shall conduct all safety trainings for both employees and supervisors. Safety trainings shall occur (Frequency) and shall be mandatory trainings. No employee or supervisor who has not attended these mandatory safety trainings shall be allowed on the job site. These mandatory trainings shall cover the following topics:

(Insert Mandatory Training Topics)

Section F: Safety and Health Inspections

(Contractor Name) shall conduct, at a minimum, daily job site safety and health inspections throughout the duration of the contract. (Person's Name) shall be the individual responsible for conducting the daily inspections. Proof of his or her qualifications are attached in appendix __. (Person's Name) shall be the competent/qualified person responsible for overseeing the safety inspections. Proof of his competency/qualifications are attached in appendix __. The daily safety and health inspections shall take place during the following time: (Time of day). During the inspections, the inspector shall make note of any deficiencies and maintain a copy of the notes on hand for review. Following the inspections, any deficiencies noted during previous inspections shall be followed up within __ days to ensure the deficiency has been corrected. A sample inspection form has been provided in appendix __. In addition to the internal inspections,

the following external inspections and certifications are needed during the project:

(Insert External Inspections/Certifications List)

Section G: Safety and Health Expectations, Incentive Programs, and Compliance:

The expectations and responsibilities of every (Contractor Name) employee are founded in (Number) objectives/goals:

(Insert list of objectives/goals)

In order to further promote health and safety, (Contractor Name) has implemented the following safety incentive program(s):

(Insert Safety Incentive Program(s))

If (Contractor Name) is found in noncompliance with safety requirements, the following policies and procedures (including disciplinary actions for noncompliance) have been identified:

(Insert Noncompliance Policies/Procedures)

It is the policy of (Contractor Name) that safety is the responsibility of every employee. The managers and supervisors of (Contractor Name) are ultimately responsible for the health and safety of the employees. Managers and supervisors shall be held responsible for any unsafe actions taken by employees while on the job site.

Section H: Mishap Reporting and Investigation

Man Hours/Exposure Hours Reporting:

(Contractor Name) shall record and report the amount of man hours worked and the number of exposure hours for all employees, including subcontractors and suppliers, for Government review. The man hours and exposure hours shall be recorded on a (Frequency) basis.

Injury and Accident Reporting:

All injuries and accidents regardless of their apparent severity at the time of occurrence, should be reported to (Person's Name) immediately. All accidents will be reported to the contracting officer/COR as soon as possible but not more than 24 hours after the incident. (Person's Name) shall fully investigate all accidents and submit the findings of the investigation along with appropriate corrective actions to the CO/COR in the prescribed format as soon as possible but no later than five days following the accident. The following accidents will require immediate accident notification:

1. A fatal injury
2. A permanent total disability
3. A permanent partial disability
4. The hospitalization of three or more people resulting from a single

- occurrence
5. Property damage of \$200,000 or more.

Section I: Plans Required by the Safety Manual

Based on our risk assessment the following plans, as listed in EM 385-1-1, appendix A, paragraph 9, shall be submitted and implemented on this particular project:

(Insert Required Safety Plans List)

The above plans are attached in appendix ___.

Section J: Risk Management Processes

We will implement the following Risk Management Processes:

(Insert Risk Management Process)

(Contractor Name) shall submit activity specific AHAs for review and acceptance by the Government prior to any work being done onsite. The Government shall have the right to request additional AHAs if it deems certain activities to need an specific AHA.

(Contractor Name), as the Prime contractor shall ensure that no work shall be performed unless a designated competent person or SSHO is present on the job site.

Environmental Protection Plan

Contractor Name

Contract Name:

Contract Number:

ENVIRONMENTAL PROTECTION PLAN

Contract No. _____

Persons Responsible for implementing this Environmental Protection Plan are listed below:

Name:	Title:
_____	_____
_____	_____

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Section V: Air Pollution-engineering Processes

Section W: Compliant Materials

Section A: Environmental Protection Plan (EPP) Requirements

We (Company Name) shall, as the Prime Contractor, establish and maintain quality control for environmental protection in compliance with all EPA and Missouri environmental regulations minimizing environmental pollution and damage during construction operation. Environmental pollution and damage is the presence of chemical, physical, or biological species or agents which create any of the following effects: Adversely affect human health or welfare; unfavorably alter ecological balances; affect species other than mankind; or degrade the utility of the environment for aesthetic, cultural, and/or historical purposes. The control of environmental pollution and damage requires consideration of land, air, and water and includes management of aesthetics, noise, waste, and other pollutants. The environmental resources within the project's boundaries, and affected resources outside of the limits of permanent work under this project, shall be protected during the duration of a task order issued under this contract.

Section B: Environmental Protection Plan (EPP) Overview and Purpose

The purpose of this EPP is to present an overview of known or potential environmental issues and/or contaminants that will be present on one or more sites presented in this contract. Issues of concern shall be individually addressed as necessary to fulfill the requirements of the proposal documents. As with all projects, the goal of (Company Name) is to minimize the release of pollutants into the environment and to comply with any restrictions, laws, and regulations that have been imposed by Federal, State, and/or local authorities. The contents of this document will relieve (Company Name) of any applicable Federal, State, and local environmental laws or regulations. During construction, it is the responsibility of (Company Name) to identify, implement, and submit for approval any additional requirements.

Section C: Non-Compliance Issues

The Contracting Officer will notify (Company Name) in writing of any observed noncompliance with Federal, State, or local laws or regulations, permits, or any other element of this EPP. (Company Name) shall, after receipt of such notice, inform the Contracting Officer of the proposed corrective action and take such action when approved by the Contracting Officer. The Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions shall be granted, or equitable adjustments allowed to (Company Name) for any such suspensions. This is in addition to any other actions the Contracting Officer may take under the contract, or in accordance with the Federal Acquisition Regulation or Federal Law. For the protection of public health, (Company Name) shall monitor and control contaminant emissions to minimize short term risks that might be posed to the community during implementation of the remedial alternative.

Section D: Plan Descriptions

A description of each plan required by environmental permit or elsewhere in this Contract such as a spill control plan, solid waste management plan, or traffic control plan, has been provided in Appendix __.

Section E: Duties

The duties and level of authority assigned to the person(s) on the job site who oversee environmental compliance, such as who is responsible for adherence to the EPP, who is responsible for training the Contractor's environmental protection personnel, etc.

Environmental Protection Manager: (Person's Name)
Alternate Environmental Protection POC: (Person's Name)

Roles and Responsibilities of Environmental Protection Manager/POC:
(Person's Name) is designated as the Primary Environmental Protection POC and Environmental Instructor for training purposes. A general description of his/her duties is listed below.

(Insert Roles and Responsibilities)

Regulatory Interface:
The Environmental Protection Manager shall be the point of contact for interface with regulatory agencies and will coordinate inspections with required parties. The Environmental POC will notify the Government of any regulatory inspections, meetings, inquiries, issues, or requests for information specific to the operations being conducted by (Contractor Name). The Environmental POC will immediately investigate all practices cited in Notice of Violations (NOVs)/Notices of Noncompliance (NONs)/enforcement actions and take immediate actions to remedy infractions to come into compliance. The Environmental POC will provide a written response identifying the alleged violation, investigation results, the cause generating the need for a response, remedial actions taken, and preventative actions (Contractor Name) shall take to prevent a recurrence. (Contractor Name) shall not enter into any agreement with a regulatory agency without notifying and obtaining concurrence from United States Army Corps of Engineers personnel. (Contractor Name) shall reimburse the United States Army Corps of Engineers for any monetary fines and penalties assessed against United States Army Corps of Engineers as a result of noncompliant actions.

Jobsite Representation:
(Contractor Name) EPP staff shall maintain a presence at the site during progress of the work and have complete authority and responsibility to take any action necessary to ensure contract compliance. (Contractor Name) shall provide adequate office space, filing systems, and other resources as necessary to maintain an effective and fully functional environmental protection. (Contractor Name) staff shall coordinate the prompt completion and furnishing of all letters, material substances, and shop drawing submittals, schedules, and all other project documentation to the Environmental POC. (Contractor Name) Environmental POC shall always be responsible to maintain these documents and records at the site, except as otherwise deemed acceptable by the Contracting Officer.

Meetings:

(Contractor Name) shall meet with the representatives of the Contracting Officer to revise the environmental protection plan in order to ensure compliance with Environmental Protection Guidelines.

Section F: Procedures

A copy of any standard or project-specific operating procedures that will be used to effectively manage and protect the environment on the project site.

Environmental Controls:

(Insert environmental control system details)

Surveillance of Work:

The Environmental Protection Point of Contact is (EPPOC) is responsible to observe all construction activities to ensure that all applicable environmental laws are absolutely adhered to and enforced. The EPPOC or the assistant EPPOC is always required to be on site throughout all stages of construction. The EPPOC or the assistant EPPOC in his absence is permitted to stop work until all environmental issues are addressed. The Project Manager, Quality Control Manager, and the Site Safety Officer are all also permitted to stop work if all applicable environmental laws are not being adhered to.

Corrective Actions:

(Contractor Name) shall comply with all Federal, State, and local laws and regulations relative to environmental protection. If the EPPOC, PM, QCM, or Corporate Safety Manager observe a deficiency or violation, work will stop until corrective action is taken. If the COR observes a deficiency, the COR will notify (Contractor Name). (Contractor Name) is then required to correspond with the COR regarding which corrective action that will be taken. Once the COR has approved an action, work may resume after the corrective action is accomplished to the satisfaction of the COR.

List of Emergency Suppliers of Containment Material:

(Insert Supplier Info)

A list of materials and equipment to be immediately available at the job site, tailored to neutralize, contain, and remove all contaminants and/or hazardous materials:

(Insert materials and equipment list)

Environmental Control Processes:

In addition to requirements specified elsewhere in this environmental protection plan, (Contractor Name) shall implement the following processes for environmental control.

(Insert Environmental Control Processes, such as pollution control, demolition plans, non-hazardous waste plans, etc. Info)

Contract Closeout Procedures:

Before completing the work, (Contractor Name) and its Subcontractors shall

remove from the work site and premises any rubbish, tools, scaffolding, equipment, and materials that are not property of the Government. Upon completion of the work, (Contractor Name) and its Subcontractors shall leave the work area in a clean, neat, and orderly condition satisfactory to the COTR. All environmental related documentation will be submitted to the COTR upon final completion.

Section G: Communications

Communication and training procedures that will be used to convey environmental management requirements to Contractor employees and subcontractors.

Environmental Protection Training:

The Environmental Protection POC, (Person's Name), shall train (Contractor Name) personnel in all phases of environmental protection during contractor site orientation. This training shall include the following learning objectives:

(Insert Training Objectives)

The Environmental Protection POC, (Person's Name), shall also train (Contractor Name) personnel in a health and safety orientation that will provide the following information:

(Insert Health and Safety Training Topics)

Training Plan:

(Insert Training Plan)

Section H: Contact Information

(Insert Emergency Contact Info)

Section I: Drawings

Drawings showing the locations of proposed temporary excavations or embankments for haul roads, stream crossings, jurisdictional wetlands, material storage areas, structures, sanitary facilities, storm drains and conveyances, and stockpiles of excess soil.

(Insert Drawings)

Section J: Work Area

Work area plan showing the proposed activity in each portion of the area and identify the areas of limited use or nonuse. Includes measures for marking the limits of use areas, including methods for protection of features to be preserved within authorized work areas and methods to control runoff and to contain materials on sites, and a traffic control plan.

(Insert Work Area Drawings and Info)

Section K: Documentation

A letter signed by an officer of the firm appointing the Environmental Manager and stating that the person is responsible for managing and implementing the Environmental Program as described in this contract.

(Insert Documentation)

Section L: Management of Natural Resources

Prior to the beginning of any construction, (Contractor Name), in coordination with the KO and/or COR, shall identify any resources to be preserved within the work area. (Contractor Name) shall not remove, cut, deface, injure, or destroy land resources without approval, and shall always provide effective protection for natural resources as defined in the following subparagraphs.

(Insert Natural Resource Management Plans)

Section M: Protection of Archeological Resources

The objective of the following plan will be to preserve and protect historical and archeological resources.

(Insert Archeological Resource Protection Plan)

Section N: Storm Water Management and Control

(Insert Storm Water Management and Control Plan)

Section O: Environmental Protection from Waste Derived from Contractor Operations

The following plan will be taken for waste materials that are non-hazardous.

(Insert Non-hazardous waste plan)

Recycling and Solid Waste Management Plan:

(Contractor Name) shall maintain an inventory of non-hazardous solid waste diversion and disposal of construction and demolition debris. A report shall be submitted to COR Environmental Department through the Contracting Officer on the first working day after each fiscal year quarter, starting the first quarter that non-hazardous solid waste has been generated.

Recycling of solid waste will be evaluated as to cost effectiveness, such as, recycling waste steel for scrap. No solid waste is to be disposed on-base. All waste management accumulated due to the construction process will be accounted for by record keeping and providing the Non-Hazardous Solid Waste Diversion Report and trip tickets the first working day each quarter during the duration of the project.

This solid waste plan minimization plan is designed to reduce consumption of energy and natural resources. The criteria listed below shall detail the Contractor's actions to comply with and to participate in Federal, State, Regional, and Local government sponsors. (Contractor Name) shall divert at least 50% of waste from local landfills through the following actions:

(Insert waste minimization info)

Removal of Construction Waste Material:

(Insert Construction Waste Material Removal Info)

Site Waste Disposal and Recycling:

(Insert Waste Disposal and Recycling Site Info)

Control and Disposal of Hazardous Waste

(Insert Hazardous Waste Control and Disposal Info)

Section P: Prevention of Releases to the Environment

Procedures to prevent releases to the environment and notification procedures in the event of a release to the environment.

(Insert Spill Control Plan)

Section Q: Regulatory Notification and Permits

List what notifications and permit applications must be made. Some require up to 180 days to obtain. Demonstrate that those permits have been obtained or applied for by including copies of applicable environmental permits. The EPP will not be approved until the permits have been obtained.

(Insert Notification and Permit Info)

Section R: Haul Routes

Submit truck and material haul routes along with a Dirt and Dust Control Plan for controlling dirt, debris, and dust. As a minimum, identify in the plan what subcontractor and equipment for cleaning along the haul route and measures to reduce dirt, dust, and debris from roadways.

(Insert Haul Routes and Dirt and Dust Control Plan)

Section S: Pollution Generating Equipment

Identify air pollution generating equipment or processes that may require federal, state, or local permits under the Clean Air Act. Determine requirements for permits and impacts of the project. Provide a list of all fixed or mobile equipment, machinery or operations that could generate air emissions during the project to the COR.

(Insert List of Pollution Generating Equipment and Operations)

Section T: Stationary Internal Combustion Engines:

Identify portable and stationary internal combustion engines that will be supplied, used, or serviced. Comply with 40 CFR 60 Subpart IIII, 40 CFR 60 Subpart JJJJ, 40 CFR 63 Subpart ZZZZ, and local regulations as applicable. At minimum, include the make, model, serial number, manufacture date, size (engine brake horsepower), and EPA emission certification status of each engine. Maintain applicable records and log hours of operation and fuel use. Logs must include reasons for operation and delineate between emergency and non-emergency operation.

Section U: Refrigerants

Identify management practices to ensure that heating, ventilation, and air condition (HVAC) work involving refrigerants complies with 40 CFR 82 requirements. Technicians must be certified, maintain copies of certification on site, use certified equipment, and log work that requires the addition or removal of refrigerants. Any refrigerant reclaimed is the property of the Government, coordinate with the COR to determine the appropriate turn in location.

Section V: Air Pollution-Engineering Processes

Identify planned air pollution-generating processes and management control measures (including, but not limited to, spray painting, abrasive blasting, demolition, material handling, fugitive dust, and fugitive emissions). Log hours of operations and track quantities of materials used.

(Insert Air Pollution Control Info)

Section W: Compliant Materials

Provide the Government a list of all SDSs for all hazardous materials proposed for use on site. Materials must be compliant with all Clean Air Act regulations for emissions including solvent and volatile organic compound contents, and applicable National Emission Standards for Hazardous Air Pollutants requirements. The Government may alter, or limit use of specific materials as needed to meet permit requirements for emissions.

(Insert Clean Air Act Compliant Material Info)

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Quality Control Plan

Contractor Name

Contract Name:

Contract Number:

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Section I: List of Definable Features of Work

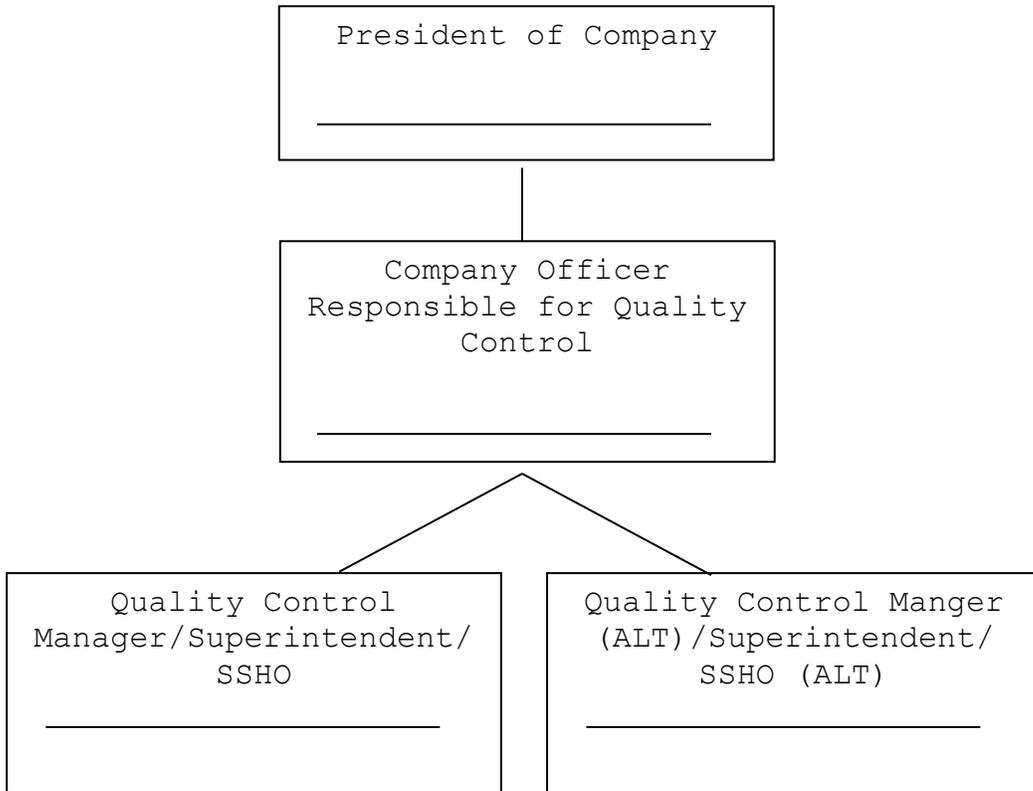
Contracting Officer
Department of the Army
Kansas City District, Corps of Engineers
700 Federal Building
Kansas City, MO 64105-2896

RE:CONTACT NO. _____

Organization Chart

Our Quality Control Coordinator for the project will be (Person's Name), Assistant Quality Control Coordinator will be (Person's Name).

Quality Control Organization Chart



Section A: Description of Quality Control Organization

Purpose:

This document shall serve as the Construction Quality Control Plan (CQCP) for the following project: (Project Name), being constructed by (Contractor Name). This CQCP applies to the design, procurement, and construction being performed, and serves as guidance for the completion of all phases of work.

Project Description:

Type: _____

Contract Authorization Number: _____

Project Description: _____

Description of Work to be Performed: _____

Lines of Authority Chart:

(Insert Lines of Authority Chart)

Three Phase Quality Control System

(Contractor Name) shall, as the Quality Control organization, perform three phases of control on all definable features of work located in this document. The Quality Control Manager, (Person's Name), shall keep complete records of all material and shop drawing submitted on hand for review and inspection by the Government.

Section B: Names and Qualification of Personnel

Project Manager:

Quality Control Manager:

Superintendent:

The resumes for the above personnel shall be attached to this Contractor Quality Control Plan (CQCP).

The personnel listed above are authorized to make field changes, and direct correction of any acceptable work when necessary to comply with contract requirements. (See attached copy of letter of authorization.) They will be responsible for performing all inspections and tests required under the contract specifications. They are responsible for proper sequence of operation in accordance with the specifications and will report any problems or difficulties to the Contracting Officer or his representative. The above named individuals also have the authority to stop work not in compliance with the contractual specifications and drawings.

Section C: Authorization Letter of CQC System Manager

RE: Contract No. _____

Dear (Person's Name)

This is your letter of authority authorizing you to act as our Contract Superintendent/Quality Control Manager for the contract mentioned above. You, as Quality Control Manager, will be working to insure the successful completion of this contract.

You are hereby authorized to make field decisions as necessary to comply with all contract requirements. It will be your duty to assure that all work is performed according to the plans and specifications. You are responsible for the actions of all employees and for the safety on this project. You are also responsible to keep me informed of job progress and work with me to complete the project as planned. Furthermore, you are to work concurrently with the Corps of Engineers' representative on this contract. As the Quality Control Manager on this project you have the authority to stop work that is not compliant with the direction provided in this contract's drawings and specifications.

A copy of our Quality Control Plan for this contract is attached. It is to be incorporated with this letter stating further responsibilities to be performed by you.

Sincerely (Person's Name)

Section D: Submittal Procedures

Submittal Register: Register has been prepared, listing each item of equipment and material for which submittals are required. Completed copies will be submitted for approval in accordance with submittal schedule that is developed ninety (90) days after Notice to Proceed. The Submittal Register will become part of the Scheduling Document and will be used to control Submittals on this contract. This register and the progress schedules will be coordinated.

The Submittal Register shall be reviewed at least every thirty (30) days. (Contractor Name) shall submit an updated list of all past due submittals to the Government. Amended dates will be furnished and corrective action will be noted. The CQC Manager will certify as correct and in strict conformance with contract drawings and specifications each submittal submitted.

Scheduling: (Person's Name) as the Quality Control Manger (QCM) shall ensure all transmittals are submitted to the Government for approval IAW specification 01 33 00 and other applicable specifications. Allow adequate time for Government review and transmittal as to cause no delay in execution of work or procurement of materials.

Reviewing: (Person's Name) as the QCM shall review and certify that all transmittals forwarded to the Government for approval, to include subcontractors and suppliers, comply with applicable specifications and drawings before submission to the Contracting officer.

Submittal Transmittal Form: Fill out all headings and blank spaces, also identify each item submitted. The CQC Manager will use RMS to track and transmit all submittals. This submittal transmittal form, and the submittal register updates must be

Managing: (Person's Name) as the QCM shall maintain copies of all transmittals and Quality Control documentation on-site. The QCM will be responsible for ensuring that all submittal procedures are in accordance with specification section 01 33 00 titled 'Submittal Procedures'.

Section E: Control, Verification, and Acceptance Testing

Testing Facilities:

(Contractor Name) shall secure the services of independent testing agencies to provide services conforming to the requirements specified in other related technical sections. Agencies which are to perform inspection services for specialized work shall provide documentation that they are certified to perform the type of specialized inspections or tests.

Laboratory Facilities:

The third-party construction and materials testing firm (Third-Party name) is planning to use is:

(Insert third-party firm info)

The third-party commissioning agent (Third-Party name) is planning to use is:

(Insert third party commissioning agent info)

Section F: Procedures for the Three Phase System

Preparatory Phase

Prior to beginning any work, our QCM shall:

- A. Review the contract requirements listed in applicable specifications and contract drawings.
- B. Maintain and make available those sections or referenced codes and standards applicable to that portion of the work to be accomplished in the field.
- C. Check to assure that materials and equipment have been tested, submitted, and approved.
- D. Inspect the site as to proper location and features of work to be performed.
- E. Ensure that the contracting officer has approved all applicable submittals and maintain copies to be on-hand for the inspection.
- F. Ensure all materials, equipment, preliminary work and personnel necessary to execute the work are complete, on-hand and/or available to begin execution.
- G. Review all applicable Activity Hazard Analysis for applicable activities to ensure all requirements are met.
- H. Discuss procedures for controlling quality of the work including repetitive deficiencies and document construction tolerances and workmanship standards for that feature of work.
- G. Ensure all preparatory inspections are conducted in accordance with specification section 01 45 00.00 10, paragraph 3.6.11

The Inspector will notify the Contracting Officer's representative at least 48 hours in advance of the review. A check list for this inspection is attached. (See Appendix A)

Initial Phase

This phase shall be accomplished at the beginning of a definable feature of work, as per the project schedule. The following shall be accomplished:

- A. A check of work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.
- B. Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing.
- C. Establish level of workmanship and verify that it meets minimum acceptable standards.
- D. Resolve all differences.
- E. Check safety to include compliance with and upgrading of the safety plan and Activity Hazard Analysis. Review the activity analysis with each worker.

- F. The Government shall be notified at least 24 hours in advance of the beginning of the Initial Phase. Separate minutes of this phase shall be prepared by (CQC Manager Name) and attached to the daily CQC report. Exact location of the Initial Phase shall be indicated for future reference and comparison with Follow-up Phases.
- G. The Initial Phase should be repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

Follow-up Phase

Final follow-up checks shall be conducted after each definable features of work has been completed. All deficiencies found during these follow-up checks shall be corrected prior to the start of a new definable feature of work which may be affected by the deficiency. The contractor shall not build upon, cover, or otherwise conceal any deficiencies.

Additional Preparatory and Initial Phases

Additional Preparatory and Initial Phases shall be conducted on the same definable features of work if the quality of ongoing work is deemed unacceptable, if there are changes in CQC staff, if work on the feature is resumed after a substantial period of inactivity, or if other problems arise.

Section G: Deficiencies

If a deficiency is found, the CQC on the Deficiency Action Form shall document it. If required, logs will be transmitted to the Government for review. When the deficiency is corrected, a follow-up inspection shall be made. If, during the follow-up inspection, it is found that the deficiency has not been corrected, the deficiency log shall not be updated.

Deficiencies shall be tracked through RMS. The CQM shall review RMS corrective action log and update it weekly. The log shall be made available to the Government's review via RMS.

The Daily QC Report is to be completed by the CQC manager. The completed form shall be transmitted to the Project Manager weekly.

Inspection Discrepancy Procedure:

This procedure is intended as an inspection system whereby all discrepancies in quality, workmanship, materials, equipment, supplies, and/or unauthorized deviations from engineering requirements in the specifications can be called to the attention of responsible supervisory personnel.

Discrepancies will be recorded on the QC Daily Report form. Each discrepancy shall be assigned a number by the recording QC Manager. The CQC Manager will fill in a concise statement locating the discrepancy and description of the discrepancy.

When materials, equipment, supplies, or workmanship, that does not conform to the contract drawings or specifications are rejected, the rejecting CQC Manager

will initiate a discrepancy report and immediately furnish copies to the Project Manager.

Upon reviewing the discrepancy report, the Project Manager, or his representative, and the CQC Manager shall examine the rejected items. If, in their opinions, any of the rejected items can be restored to a usable condition, the discrepancy report shall be noted as such.

Upon completion of restoring items to a usable condition, the CQC Manager shall be notified and he shall re-inspect the items to the original requirements and the restoration requirements on the discrepancy report. If the item is found acceptable, the discrepancy report shall be noted as such. If the item is found unacceptable due to poor workmanship, etc., arising from the restoration process, the item shall be treated as a first-time rejection. The item shall be resubmitted for inspection only after further restoration work.

The Project Manager, along with the CQC Manager, shall formulate a disposition of each listed, uncorrected discrepancy and shall periodically review the discrepancy report log. They shall establish timelines for final resolutions of all discrepancies.

Section H: Reporting Procedures

The contractor quality control personnel will perform all tests as indicated in the contract specifications using the appropriate ASTM, or other approved testing methods. The following list itemizes some of the forms, which the Contractor quality control shall use. This list may not be all-inclusive and may be revised and updated as conditions require. All forms listed below shall be readily available for review by the Government.

Subcontractor Daily QC Report:

To be filled out daily by the subcontractor's quality control personnel covering the day's activities, approved by the prime Contractor's QC Manager, be implemented or referenced into the contractor's daily report, and placed in the prime Contractor's file.

Construction Daily QC Report:

To be used by the CQC Manager to report the day's quality control activities of the prime Contractor and all subcontractors, submitted to the Government daily.

Trip Report:

Used to report activities covering offsite trips. This form shall be submitted with the Contractor's Quality Control Daily Report.

Deliver the following to the Contracting Officer during Construction:

- a. CQC Report: Mail or hand-deliver the original and one copy by 10:00 AM the next working day after each day that work is performed and for every seven consecutive calendar days of no-work.
- b. Contractor Production Report: Mail or hand-deliver the original and one

copy by 10:00 AM the next working day after each day that work is performed and for every seven consecutive calendar days of no-work, attached to the CQC Report.

- c. Preparatory Phase Checklist: Original attached to the original CQC Report and one copy attached to each QC Report copy.
- d. Initial Phase Checklist: Original attached to the original CQC Report and one copy attached to each QC Report copy.
- e. QC Specialist Reports: Mail or hand-deliver the original and one copy by 10:00 AM the next working day after each day that work is performed.
- f. Field Test Reports: Mail or hand-deliver the original within two working days after the test is performed, attached to the original CQC Report and one copy attached to each QC Report copy.
- g. Monthly Summary Report of Tests: Mail or hand-deliver the original attached to the last QC Report of the month.
- h. Testing Plan and Log: Mail or hand-deliver the original attached to the last QC Report of the month and one copy attached to each QC Report copy. A copy of the final Testing Plan and Log shall be provided to the RMS preparer for inclusion into the RMS documentation.
- i. Rework Items List: Submit lists containing new entries daily, in the same manner as the CQC Report. Mail or hand-deliver the original attached to the last QC Report of the month and one copy attached to each QC Report copy.
- j. CQC Meeting Minutes: Mail or hand-deliver the original within two working days after the meeting is held, attached to the original CQC Report and one copy attached to each QC Report copy.

Daily QC Reports:

Daily QC reports and all attachments shall be submitted induplicate on the first working day following the day covered by the report. This form submission will occur using the RMS system of project daily reporting.

Labor and equipment exposure hours will be tracked on a daily basis to allow this data to be rolled up into a monthly exposure report.

Copies of all inspection and test reports including data and calculation sheets will be submitted with the daily QC report.

QC Manager's reports shall contain notations specifically defining the phase of control on each day's activities and note compliance or non-compliance with previous phases when applicable. The Government shall be notified at least 48 hours in advance of all tests to be performed in the field.

Materials Certification:

Copies of all purchase orders or subcontracts requiring receiving inspection shall be given to the CQC Manager for receiving and recording purposes. When the purchase order requires vendor certification of materials, equipment, or supplies, such certification shall be verified as to accuracy and conformance and may be used in lieu of a test for those properties covered by the certification. Copies of all certifications received shall be maintained in the QC folder and shall be readily available to the Government upon request or submitted as provided in the contract specifications.

Calibration of Equipment:

All contractors furnished measuring and test equipment shall be calibrated and maintained to traceable government standards. Records of these calibration certifications shall be maintained by the QC Department and made available to the Government upon request. Each instrument shall be plainly and permanently numbered, the equipment operated only be those persons directly responsible for the equipment or personnel under their cognizance. Each piece of equipment shall be checked for accuracy as recommended by manufacturer for frequency of calibration. A certified laboratory shall conduct required calibration of measuring and test equipment. Measuring and test equipment dropped, damaged, or otherwise believed to be inaccurate shall be removed from services and recalibrated.

Final Inspection and Testing:

Prior to final inspection or start of test, all systems being inspected or tested shall be completed and accepted by the QCM or designated technician. After QCM acceptance, the final inspection and test may proceed in accordance with the following steps:

1. Test personnel will be verified as having a working knowledge of the special characteristics of the instruments being used.
2. The particular inspection or test requirements and criteria for successful completion of the required inspection or test will be reviewed and noted.
3. Upon satisfactory verification of these requirements, the test may proceed. Each reading will be verified and documented by the Quality Control Inspector or his assistant. All functional validations or tests will be performed by the Quality Control Department unless otherwise noted. No functional test will be accepted without properly authorized and approved test procedures.
4. The general requirements of final acceptance will include, but not be limited to the following:
 1. Project complete with punch list
 2. General appearance
 3. Workmanship
 4. Cleanliness of areas and equipment
 5. Identification of equipment
 6. Removal of unused materials and temporary facilities
 7. Condition of job files and completion of paperwork

The final acceptance inspection will be formally scheduled by the Contracting Officer based upon results of the Pre-Final inspection. CQC Manager must notify the Contracting Officer at least 14 days prior to the final acceptance inspection and include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining work performed under the contract, will be complete and acceptable by the date

scheduled for the final acceptance inspection.

Revision Policy:

Activities, programs, and procedures not covered in this Quality Control Plan or proposals or additions to these standards, shall be discussed at meetings held for that purpose at such times and places the CQC Manager may select, and shall take such action to request acceptance from the government to incorporate such revisions as deemed necessary.

Section I: List of Definable Features of Work

- 1.
- 2.
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- 5.

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SMALL PROJECT CONSTRUCTION PROGRESS SCHEDULES
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PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Baseline Construction Schedule; G,

SD-07 Certificates

Monthly Updates; G,C

1.2 PRE-CONSTRUCTION SCHEDULE REQUIREMENT

Within 30 calendar days after contract award and prior to the start of work, prepare and submit to the Contracting Officer a Baseline Construction Schedule in the form of a Network Analysis Schedule (NAS) Bar Chart Schedule in accordance with the terms in Contract Clause FAR 52.236-15 Schedules for Construction Contracts, except as modified in this contract. The approval of a Baseline Construction Schedule is a condition precedent to:

- a. The Contractor starting demolition work or construction stage(s) of the contract.
- b. Processing Contractor's invoice(s) for construction activities/items of work.
- c. Review of any schedule updates.

Submittal of the Baseline Design and Construction Schedule, and subsequent schedule updates, is understood to be the Contractor's certification that the submitted schedule meets the requirements of the Contract Documents, represents the Contractor's plan on how the work will be accomplished, and accurately reflects the work that has been accomplished and how it was sequenced (as-built logic).

1.3 SCHEDULE FORMAT

1.3.1 Network Analysis Schedule (NAS)

Use the critical path method (CPM) to schedule and control project activities. Prepare and maintain project schedules using Primavera P6 or Microsoft Project 2010. Importing data into the scheduling program using data conversion techniques or third party software is cause for rejection of the submitted schedule.

1.3.1.1 Activity Requirements

a. Build the Schedule as follows:

- (1) The Project Schedule must show pre-construction submittals, technical submittals and processing time, Government review periods, material/equipment delivery, utility outages, all on-site construction, inspection, testing and closeout activities. Government and Contractor on-site work activities must be driven by calendars that reflect Saturdays, Sundays and all Federal Holidays as non-work days.
- (2) Include design and permit activities with the necessary conference and follow-up actions and design package submission dates. Include the design schedule in the project schedule, showing the sequence of events involved in carrying out the project design tasks within the specific contract period. Provide at a detailed level of scheduling sufficient to identify all major design tasks, including those that control the flow of work. Also include review and correction periods associated with each item.
- (3) With the exception of the Contract Award and End Contract milestone activities, use of open-ended activities is not allowed; each activity must have predecessor and successor ties. No activity must have open start or open finish (dangling) logic. Minimize redundant logic ties. Once an activity exists on the schedule it must not be deleted or renamed to change the scope of the activity and must not be removed from the schedule logic without approval from the Contracting Officer. While an activity cannot be deleted, where said activity is no longer applicable to the schedule but must remain within the logic stream for historical record, it can be changed to a milestone. Document any such change in the milestone's "Notebook," including a date and explanation for the change. The ID number for a deleted activity must not be re-used for another activity.
- (4) Assign each activity its appropriate Responsibility Code and Area Code, indicating location and responsibility to accomplish the work indicated by the activity, Phase Code, and Work Location Code. Assign one Responsibility Code per Activity.
- (5) Date/time constraints or lags, other than those required by the contract, are not allowed unless approved by the Contracting Officer. Include as the last activity in the contract schedule, a milestone activity named "Contract Completion Date" with a constraint type of "Finish on or Before" and set to the contract required completion date.

1.3.1.2 Primavera P6 Settings and Parameters

Use the following Primavera P6 settings and parameters in preparing the Baseline Schedule. Deviation from these settings and parameters, without prior consent of the Contracting Officer, is cause for rejection of schedule submission.

- a. General: Define or establish Calendars and Activity Codes at the "Project" level, not the "Global" level.

- b. Cost load using a single lump sum labor resource. The price/unit must be \$1/hr, default units/time must be "8h/d", and settings "Auto Compute Actuals" and "Calculate Costs from Units" must be selected.
- c. Admin Drop-Down Menu, Admin Preferences, Time Periods Tab:
 - (1) Set time periods for P6 to 8.0 Hours/Day, 40.0 Hours/Week, 172.0 Hours/Month and 2000.0 Hours/Year.
 - (2) Use assigned calendar to specify the number of work hours for each time period: Must be checked.
- d. Project Level, Defaults Tab:
 - (1) Duration Type: Set to "Fixed Duration & Units".
 - (2) Percent Complete Type: Set to "Physical".
 - (3) Activity Type: Set to "Task Dependent".
 - (4) Calendar: Set to "Standard 5 Day Workweek". Calendar must reflect Saturday, Sunday and all Federal holidays as non workdays. Weather calendars should be developed if appropriate. Alternative calendars may be used with Contracting Officer approval.
- e. Project Level, Calculations Tab:
 - (1) Reset Remaining Duration and Units to Original: Must be Checked.
 - (2) Add Actual to Remaining: Must be Checked.
 - (3) Recalculate Actual units and Cost when duration percent complete changes: Must be UnChecked.
 - (4) Link Actual to Date and Actual This Period Units and Cost: Must be Checked.
 - (5) Price/Unit: Set to "\$0/h".
 - (6) Update units when costs change on resource assignments: Must be Unchecked.
- f. Project Level, Settings Tab:
 - (1) Define Critical Activities: Check "Longest Path".
- g. Schedule Options:
 - (1) When scheduling progressed activities use: "Retained Logic".
- h. No on-site construction activity may have durations in excess of 20 working days.

1.3.1.3 Microsoft Project 2010 Settings and Parameters

Use the following MS Project 2010 settings and parameters in preparing the Baseline Schedule:

- a. No on-site construction activity may have durations in excess of 20

working days.

- b. Critical is defined as having zero days of Total Slack. Within the
- c. Logic: include the following setting: File, Options, Schedule tab - Split in-progress tasks - must be selected.
- d. Status Date gridline is displayed in the Gantt Chart view.
- e. Time Periods established for the project are set to 8 Hrs/Day, 40 Hrs/Week and 20 days/month.
- f. Week starts on Monday must be selected.

1.3.1.4 Cost Loading Microsoft Project 2010 Schedules

Assign material, labor and equipment costs to their respective Construction Activities. Assign material and equipment costs, for which payment will be requested in advance of installation, to their respective procurement activity (i.e. the material/equipment on-site activity). Evenly disperse overhead and profit to each activity over the duration of the project. Cost loading must total to 100 percent of the value of the contract.

- a. With each schedule submission, submit an Earned Value Report showing activity budget, cost percent complete, earned amount and cost to complete. Revise when the contract is modified or as directed by the Contracting Officer.
- b. With each schedule submission, provide a Schedule Variance control (SVC) diagram showing Cash FLOW S-Curves indicating planned project cost based on projected early and late activity finish dates.

1.3.2 Schedule Submittals and Procedures

Submit Schedules and updates in both Adobe pdf and in the native schedule software file.

1.4 SCHEDULE MONTHLY UPDATES

Update the Schedule at monthly intervals or when the schedule has been revised. Keep the updated schedule current, reflecting actual activity progress and plan for completing the remaining work. Submit copies of purchase orders and confirmation of delivery dates as directed by the Contracting Officer.

- a. Narrative Report: Identify and justify the following:
 - (1) Progress made in each area of the project;
 - (2) Longest Path
 - (3) Date/time constraint(s), other than those required by the contract;
 - (4) Listing of changes made between the previous schedule and current updated schedule including: added or removed activities, original and remaining durations for activities that have not started, logic (sequence, constraint, lag/lead), milestones, planned sequence of operations, longest path, calendars or calendar assignments, and cost loading.

- (5) Any decrease in previously reported activity Earned Amount;
- (6) Pending items and status thereof, including permits, changes orders, and time extensions;
- (7) Status of Contract Completion Date and interim milestones;
- (8) Current and anticipated delays (describe cause of delay and corrective actions(s) and mitigation measures to minimize);
- (9) Description of current and future schedule problem areas.

For each entry in the narrative report, cite the respective Activity ID and Activity Name, the date and reason for the change, and description of the change.

1.5 CONTRACT MODIFICATION

Submit a Time Impact Analysis (TIA) with each cost and time proposal for a proposed change. TIA must illustrate the influence of each change or delay on the Contract Completion Date or milestones. No time extensions will be granted nor delay damages paid unless a delay occurs which consumes all available Project Float, and extends the Projected Finish beyond the Contract Completion Date. The time extension will be in calendar days.

Actual delays that are found to be caused by the Contractor's own actions, which result in a calculated schedule delay will not be a cause for an extension to the performance period, completion date, or any interim milestone date.

- a. Each TIA must be in both narrative and schedule form. The narrative must define the scope and conditions of the change; provide start and finish dates of impact, successor and predecessor activity to impact period, responsible party, describe how it originated, and how it impacts the schedule. The schedule submission must consist of three native files:
 - (1) Fragnet used to define the scope of the changed condition inserted into the project schedule that was approved at the time that the delay occurred.
- b. For claimed as-built project delay, the inserted fragnet TIA method must be modified to account for as-built events known to occur after the data date of schedule update used.
- c. TIAs must include any mitigation, and must determine the apportionment of the overall delay assignable to each individual delay. The associated narrative must clearly describe the findings in a chronological listing beginning with the earliest delay event.

1.6 3-WEEK LOOK AHEAD SCHEDULE

Prepare and issue a 3-Week Look Ahead schedule to provide a more detailed day-to-day plan of upcoming work identified on the Construction Schedule. Key the work plans to activity numbers when a NAS is required and update each week to show the planned work for the current and following two-week period. Additionally, include upcoming outages, closures, preparatory meetings, and initial meetings. Identify critical path activities on the

Three-Week Look Ahead Schedule. Deliver the 3-Week Look Ahead Schedule to the Contracting Officer, and review during the weekly CQC Coordination or Production Meeting.

1.7 CORRESPONDENCE AND TEST REPORTS:

Correspondence (e.g., letters, Requests for Information (RFIs), e-mails, meeting minute items, Production and QC Daily Reports, material delivery tickets, photographs) must reference Schedule Activities that are being addressed. Test reports (e.g., concrete, soil compaction, weld, pressure) must reference Schedule Activities that are being addressed.

1.8 ADDITIONAL SCHEDULING REQUIREMENTS

Any references to additional scheduling requirements, including systems to be inspected, tested and commissioned, that are located throughout the remainder of the Contract Documents, are subject to all requirements of this section.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

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PART 2 PRODUCTS

PART 3 EXECUTION

ATTACHMENTS:

ENG Form 4025-R

Attachement 3 - Submittal Register

1. ENG 4025 - Submittal Transmittal Form
2. ENG 4026 - Routing of Shop Drawings Equipment Data Material Samples or Manufacturer's Certificates of Compliance for Approval
3. Submittal Register

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SECTION 01 33 00

SUBMITTAL PROCEDURES
08/18

PART 1 GENERAL

1.1 SUMMARY

1.1.1 Submittal Information

The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Each submittal is to be complete and in sufficient detail to allow ready determination of compliance with contract requirements.

Units of weights and measures used on all submittals are to be the same as those used in the contract drawings.

1.1.2 Project Type

The Contractor's Quality Control (CQC) System Manager are to check and approve all items before submittal and stamp, sign, and date indicating action taken. Proposed deviations from the contract requirements are to be clearly identified. Include within submittals items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals.

1.1.3 Submission of Submittals

Schedule and provide submittals requiring Government approval before acquiring the material or equipment covered thereby. Pick up and dispose of samples not incorporated into the work in accordance with manufacturer's Safety Data Sheets (SDS) and in compliance with existing laws and regulations.

1.2 DEFINITIONS

1.2.1 Submittal Descriptions (SD)

Submittal requirements are specified in the technical sections. Examples and descriptions of submittals identified by the Submittal Description (SD) numbers and titles follow:

SD-01 Preconstruction Submittals

Submittals that are required prior to or at the start of construction (work) or the next major phase of the construction on a multiphase contract.

Preconstruction Submittals include schedules and a tabular list of locations, features, and other pertinent information regarding products, materials, equipment, or components to be used in the work.

Certificates Of Insurance

Surety Bonds

List Of Proposed Subcontractors

List Of Proposed Products

Baseline Network Analysis Schedule (NAS)

Submittal Register

Schedule Of Prices Or Earned Value Report

Accident Prevention Plan

Work Plan

Quality Control (QC) plan

Environmental Protection Plan

SD-02 Shop Drawings

Drawings, diagrams and schedules specifically prepared to illustrate some portion of the work.

Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to the Contractor for integrating the product or system into the project.

Drawings prepared by or for the Contractor to show how multiple systems and interdisciplinary work will be coordinated.

SD-03 Product Data

Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions and brochures illustrating size, physical appearance and other characteristics of materials, systems or equipment for some portion of the work.

Samples of warranty language when the contract requires extended product warranties.

Provide full computer selection output for equipment selected by computer software.

SD-04 Samples

Fabricated or unfabricated physical examples of materials, equipment or workmanship that illustrate functional and aesthetic characteristics of a material or product and establish standards by which the work can be judged.

Color samples from the manufacturer's standard line (or custom color samples if specified) to be used in selecting or approving colors for the project.

Field samples and mock-ups constructed on the project site establish standards ensuring work can be judged. Includes assemblies or portions of assemblies that are to be incorporated into the project and those that will be removed at conclusion of the work.

SD-06 Test Reports

Report signed by authorized official of testing laboratory that a material, product or system identical to the material, product or system to be provided has been tested in accord with specified requirements. Unless specified in another section, testing must have been within three years of date of contract award for the project.

Report that includes findings of a test required to be performed on an actual portion of the work or prototype prepared for the project before shipment to job site.

Report that includes finding of a test made at the job site or on sample taken from the job site, on portion of work during or after installation.

Investigation reports

Daily logs and checklists

Final acceptance test and operational test procedure

SD-07 Certificates

Statements printed on the manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that the product, system, or material meets specification requirements. Must be dated after award of project contract and clearly name the project.

Document required of Contractor, or of a manufacturer, supplier, installer or Subcontractor through Contractor. The document purpose is to further promote the orderly progression of a portion of the work by documenting procedures, acceptability of methods, or personnel qualifications.

Confined space entry permits

Text of posted operating instructions

SD-11 Closeout Submittals

Documentation to record compliance with technical or administrative requirements or to establish an administrative mechanism.

Submittals required for Guiding Principle Validation (GPV) or Third Party Certification (TPC).

Special requirements necessary to properly close out a construction contract. For example, Record Drawings and as-built drawings. Also, submittal requirements necessary to properly close out a major phase of construction on a multi-phase contract.

1.2.2 Approving Authority

Office or designated person authorized to approve the submittal.

1.2.3 Work

As used in this section, on-site and off-site construction required by contract documents, including labor necessary to produce submittals, construction, materials, products, equipment, and systems incorporated or to be incorporated in such construction. In exception, excludes work to produce SD-01 submittals.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following in accordance with this section.

SD-01 Preconstruction Submittals

Submittal Register; G, RO

1.4 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

Unless directed otherwise, the words "Government Approval" associated with "G" designated submittals are interpreted in the context of the below defined submittal types. Submittal Reviewers include the following:

AE - Architect Engineer
DO - District Office
RO - Resident Office
CxA - Commissioning Agent

1.4.1 Government Approved (G)

Government approval is required for extensions of design, critical materials, variations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Government.

Government approval is required for any variations from the Solicitation or the Accepted Proposal and for other items as designated by the Government.

Within the terms of the Contract Clause SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, submittals are considered to be "shop drawings."

1.4.2 For Information Only

Submittals not requiring Government approval will be for information only. For Design-build construction all submittals not requiring DOR or Government approval will be for information only. Within the terms of the Contract Clause SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, they are not considered to be "shop drawings."

1.5 PREPARATION

1.5.1 Transmittal Form

Use the ENG Form 4025-R transmittal form for submitting both Government-approved and information-only submittals. Submit in accordance with the instructions on the reverse side of the form. These forms will be furnished to the Contractor and are included in the RMS CM software that the Contractor is required to use for this contract. Properly complete this form by filling out all the heading blank spaces and identifying each item submitted. Exercise special care to ensure proper listing of the specification paragraph and sheet number of the contract drawings pertinent to the data submitted for each item.

1.5.2 Submittal Format

1.5.2.1 Format of SD-01 Preconstruction Submittals

When the submittal includes a document that is to be used in the project, or is to become part of the project record, other than as a submittal, do not apply the Contractor's approval stamp to the document itself, but to a separate sheet accompanying the document.

Provide data in the unit of measure used in the contract documents.

1.5.2.2 Format for SD-02 Shop Drawings

Provide shop drawings not less than 8 1/2 by 11 inches nor more than 30 by 42 inches, except for full-size patterns or templates. Prepare drawings to accurate size, with scale indicated, unless another form is required. Ensure drawings are suitable for reproduction and of a quality to produce clear, distinct lines and letters, with dark lines on a white background.

- a. Include the nameplate data, size, and capacity on drawings. Also include applicable federal, military, industry, and technical society publication references.
- b. Dimension drawings, except diagrams and schematic drawings. Prepare drawings demonstrating interface with other trades to scale. Use the same unit of measure for shop drawings as indicated on the contract drawings. Identify materials and products for work shown.

Submit an electronic copy of drawings in PDF format.

1.5.2.2.1 Drawing Identification

Include on each drawing the drawing title, number, date, and revision numbers and dates, in addition to information required in paragraph IDENTIFYING SUBMITTALS.

Number drawings in a logical sequence. Each drawing is to bear the number of the submittal in a uniform location next to the title block. Place the Government contract number in the margin, immediately below the title block, for each drawing.

Reserve a blank space, no smaller than 1 inch on the right-hand side of each sheet for the Government disposition stamp.

1.5.2.3 Format of SD-03 Product Data

Present product data submittals for each section. Include a table of contents, listing the page and catalog item numbers for product data.

Indicate, by prominent notation, each product that is being submitted; indicate the specification section number and paragraph number to which it pertains.

1.5.2.3.1 Product Information

Supplement product data with material prepared for the project to satisfy the submittal requirements where product data does not exist. Identify this material as developed specifically for the project, with information and format as required for submission of SD-07 Certificates.

Provide product data in units used in the Contract documents. Where product data are included in preprinted catalogs with another unit, submit the dimensions in contract document units, on a separate sheet.

1.5.2.3.2 Standards

Where equipment or materials are specified to conform to industry or technical-society reference standards of such organizations as the American National Standards Institute (ANSI), ASTM International (ASTM), National Electrical Manufacturer's Association (NEMA), Underwriters Laboratories (UL), or Association of Edison Illuminating Companies (AEIC), submit proof of such compliance. The label or listing by the specified organization will be acceptable evidence of compliance. In lieu of the label or listing, submit a certificate from an independent testing organization, competent to perform testing, and approved by the Contracting Officer. State on the certificate that the item has been tested in accordance with the specified organization's test methods and that the item complies with the specified organization's reference standard.

1.5.2.3.3 Data Submission

Collect required data submittals for each specific material, product, unit of work, or system into a single submittal that is marked for choices, options, and portions applicable to the submittal. Mark each copy of the product data identically. Partial submittals will not be accepted for expedition of the construction effort.

Submit the manufacturer's instructions before installation.

1.5.2.4 Format of SD-04 Samples

1.5.2.4.1 Sample Characteristics

Furnish samples in the following sizes, unless otherwise specified or unless the manufacturer has prepackaged samples of approximately the same size as specified:

- a. Sample of Equipment or Device: Full size.
- b. Sample of Materials Less Than 2 by 3 inches: Built up to 8 1/2 by 11 inches.
- c. Sample of Materials Exceeding 8 1/2 by 11 inches: Cut down to 8 1/2 by

11 inches and adequate to indicate color, texture, and material variations.

- d. Sample of Linear Devices or Materials: 10 inch length or length to be supplied, if less than 10 inches. Examples of linear devices or materials are conduit and handrails.
- e. Sample Volume of Nonsolid Materials: Pint. Examples of nonsolid materials are sand and paint.
- f. Color Selection Samples: 2 by 4 inches. Where samples are specified for selection of color, finish, pattern, or texture, submit the full set of available choices for the material or product specified. Sizes and quantities of samples are to represent their respective standard unit.
- g. Sample Panel: 4 by 4 feet.
- h. Sample Installation: 100 square feet.

1.5.2.4.2 Sample Incorporation

Reusable Samples: Incorporate returned samples into work only if so specified or indicated. Incorporated samples are to be in undamaged condition at the time of use.

Recording of Sample Installation: Note and preserve the notation of any area constituting a sample installation, but remove the notation at the final clean-up of the project.

1.5.2.4.3 Comparison Sample

Samples Showing Range of Variation: Where variations in color, finish, pattern, or texture are unavoidable due to nature of the materials, submit sets of samples of not less than three units showing extremes and middle of range. Mark each unit to describe its relation to the range of the variation.

When color, texture, or pattern is specified by naming a particular manufacturer and style, include one sample of that manufacturer and style, for comparison.

1.5.2.5 Format of SD-05 Design Data

Provide design data and certificates on 8 1/2 by 11 inch paper.

1.5.2.6 Format of SD-06 Test Reports

By prominent notation, indicate each report in the submittal. Indicate the specification number and paragraph number to which each report pertains.

1.5.2.7 Format of SD-07 Certificates

Provide design data and certificates on 8 1/2 by 11 inch paper.

1.5.2.8 Format of SD-08 Manufacturer's Instructions

Present manufacturer's instructions submittals for each section. Include the manufacturer's name, trade name, place of manufacture, and catalog

model or number on product data. Also include applicable federal, military, industry, and technical-society publication references. If supplemental information is needed to clarify the manufacturer's data, submit it as specified for SD-07 Certificates.

Submit the manufacturer's instructions before installation.

1.5.2.8.1 Standards

Where equipment or materials are specified to conform to industry or technical-society reference standards of such organizations as the American National Standards Institute (ANSI), ASTM International (ASTM), National Electrical Manufacturer's Association (NEMA), Underwriters Laboratories (UL), or Association of Edison Illuminating Companies (AEIC), submit proof of such compliance. The label or listing by the specified organization will be acceptable evidence of compliance. In lieu of the label or listing, submit a certificate from an independent testing organization, competent to perform testing, and approved by the Contracting Officer. State on the certificate that the item has been tested in accordance with the specified organization's test methods and that the item complies with the specified organization's reference standard.

1.5.2.9 Format of SD-09 Manufacturer's Field Reports

By prominent notation, indicate each report in the submittal. Indicate the specification number and paragraph number to which each report pertains.

1.5.2.10 Format of SD-10 Operation and Maintenance Data (O&M)

Comply with the requirements specified in Section 01 78 23 OPERATION AND MAINTENANCE DATA for O&M Data format.

1.5.2.11 Format of SD-11 Closeout Submittals

When the submittal includes a document that is to be used in the project or is to become part of the project record, other than as a submittal, do not apply the Contractor's approval stamp to the document itself, but to a separate sheet accompanying the document.

Provide data in the unit of measure used in the contract documents.

1.5.3 Source Drawings for Shop Drawings

1.5.3.1 Source Drawings

The entire set of source drawing files (DWG) will not be provided to the Contractor. Request the specific Drawing Number for the preparation of shop drawings. Only those drawings requested to prepare shop drawings will be provided. These drawings are provided only after award.

1.5.3.2 Terms and Conditions

Data contained on these electronic files must not be used for any purpose other than as a convenience in the preparation of construction data for the referenced project. Any other use or reuse is at the sole risk of the Contractor and without liability or legal exposure to the Government. The Contractor must make no claim, and waives to the fullest extent permitted by law any claim or cause of action of any nature against the Government, its agents, or its subconsultants that may arise out of or in connection

with the use of these electronic files. The Contractor must, to the fullest extent permitted by law, indemnify and hold the Government harmless against all damages, liabilities, or costs, including reasonable attorney's fees and defense costs, arising out of or resulting from the use of these electronic files.

These electronic source drawing files are not construction documents. Differences may exist between the source drawing files and the corresponding construction documents. The Government makes no representation regarding the accuracy or completeness of the electronic source drawing files, nor does it make representation to the compatibility of these files with the Contractor hardware or software. The Contractor is responsible for determining if any conflict exists. In the event that a conflict arises between the signed and sealed construction documents prepared by the Government and the furnished source drawing files, the signed and sealed construction documents govern. Use of these source drawing files does not relieve the Contractor of the duty to fully comply with the contract documents, including and without limitation the need to check, confirm and coordinate the work of all contractors for the project. If the Contractor uses, duplicates or modifies these electronic source drawing files for use in producing construction data related to this contract, remove all previous indication of ownership (seals, logos, signatures, initials and dates).

1.5.4 Electronic File Format

Provide submittals in electronic format, with the exception of material samples required for SD-04 Samples items. In addition to the electronic submittal, provide 1 hard copy of the submittals. Compile the submittal file as a single, complete document, to include the Transmittal Form described within. Name the electronic submittal file specifically according to its contents, and coordinate the file naming convention with the Contracting Officer. Electronic files must be of sufficient quality that all information is legible. Use PDF as the electronic format, unless otherwise specified or directed by the Contracting Officer. Generate PDF files from original documents with bookmarks so that the text included in the PDF file is searchable and can be copied. If documents are scanned, optical character resolution (OCR) routines are required. Index and bookmark files exceeding 30 pages to allow efficient navigation of the file. When required, the electronic file must include a valid electronic signature or a scan of a signature.

E-mail electronic submittal documents smaller than 10MB to an e-mail address as directed by the Contracting Officer. Provide electronic documents over 10 MB on an optical disc or through an electronic file sharing system such as the AMRDEC SAFE Web Application located at the following website: <https://safe.amrdec.army.mil/safe/>.

1.6 ELECTRONIC SUBMITTAL PROCEDURES

Submittals shall be transmitted, logged and tracked as follows, unless otherwise specified in Divisions 1 through 48. For Design-Build delivery methods, follow submittal procedures in Specification Section 01 33 16 for design submittal requirements and this section for all other submittal requirements.

1.6.1 ELECTRONIC SUBMITTAL - EMAIL

Provide submittals in electronic format, with the exception of material

samples required for SD-04 Samples items. In addition to the electronic submittal, provide one hard copy of the submittals. Compile the submittal file as a single, complete document, to include the Transmittal Form described within. Name the electronic submittal file specifically according to its contents, coordinate the file naming convention with the Contracting Officer. Electronic files must be of sufficient quality that all information is legible. Use PDF as the electronic format, unless otherwise specified or directed by the Contracting Officer. Generate PDF files from original documents with bookmarks so that the text included in the PDF file is both searchable and can be copied. If documents are scanned, Optical Character Resolution (OCR) routines are required. Index and bookmark files exceeding 30 pages to allow efficient navigation of the file. When required, the electronic file must include a valid electronic signature, or scan of a signature.

Submittals shall be in a single, legible.pdf format. An ENG 4025 is required for all electronic submittals (G, FIO) and both ENG 4026 and ENG 4025 forms are required for submittals with DO, A/E, CxA, FP and TX reviewer designations. (as applicable)

Email electronic submittal documents fewer than 10MB. For items to be reviewed by the designer-of-record ("DO" or "AE") or Commissioning Agent ("CxA"), submittal notifications shall be sent via e-mail to the Kansas City District Office at the following e-mail address(es), where distribution will be made to the appropriate reviewer:

ED.DTConstructionSubmittals@usace.army.mil - "DO"

Provide electronic documents over 10MB on an optical disc, or through an electronic file sharing system such as the AMRDEC SAFE Web Application located at the following website: <https://safe.amrdec.army.mil/safe/>.

Samples requiring approval for color or material shall be physical samples. Samples shall be mailed or delivered concurrently with the submission of digital submittal data. Submittals shall not be considered received until samples have arrived at all office locations required. Mail or deliver samples designated G, RO, and FIO to the local Resident/Field Office. Submittals requiring samples and designated "DO" shall be mailed or delivered to the Resident Office as well as mailed to the following address with hard copies of all digitally submitted documents.

US Army Engineer District, Kansas City
ATTN: ED-DT (Construction Submittal Coordinator)
Federal Building, Room 502, 601 East 12th Street
Kansas City, Missouri 64106-2896

1.7 SUBMITTAL PROCEDURES

The submittal process shall be as follows, except if more stringent requirements are specified in Divisions 1 through 48.

1.7.1 Procedures

Notifications shall be sent to the appropriate government representatives responsible for reviewing the submittal as determined by submittal designation found in the submittal register or applicable specification whichever is more stringent. Coordinate with the Contracting Officer's Representative to ascertain the contact information of government reviewers to be uploaded into the submittal program during submittal program

configuration. (if not specified in this section)

1.7.1.1 Designer Review

For items to be reviewed by the designer-of-record ("DO" or "AE") or Commissioning Agent ("CxA"), submittal notifications shall be sent via the web-based electronic program to the Kansas City District Office at the following e-mail address(es), where distribution will be made to the appropriate reviewer:

ED.DTConstructionSubmittals@usace.army.mil - "DO"

Samples requiring approval for color or material shall be physical samples. Samples shall be mailed or delivered concurrently with the submission of digital submittal data. Submittals shall not be considered received until samples have arrived at all office locations required. Mail or deliver samples designated G, RO, and FIO to the local Resident/Field Office. Submittals requiring samples and designated "DO" shall be mailed or delivered to the Resident Office as well as mailed to the following address with hard copies of all digitally submitted documents.

US Army Engineer District, Kansas City
ATTN: ED-DT (Construction Submittal Coordinator)
Federal Building, Room 502, 601 East 12th Street
Kansas City, Missouri 64106-2896

1.7.1.2 Resident Office Review

The Contractor shall furnish 1 hard copies of all submittals to the Resident Office. The submittal is not considered accepted until the COR or ACO has signed the ENG 4025.

1.7.1.3 Information Only

For Information only submittals, the Contractor shall furnish 1 copy of ENG Form 4025 and 1 copy of the submittal data to the District Office.

1.7.1.4 Submittal Quantities

Should there be a discrepancy between submittal quantities required in Divisions 1 through 48 and this section, the more stringent shall govern. The number of physical copies shall be as specified in this section or as required by Div. 1 through 48, whichever is more stringent.

1.8 ELECTRONIC SUBMITTAL WORKFLOW

Only individuals with roles marked with an asterisk shall have the ability to restart the submittal process.

Reviews shown atop one another are concurrent reviews. All concurrent reviews must be complete prior to progression to the next phase of review.

The QCM and COR shall have administrative rights within the electronic submittal program. Other reviewers may only provide reviews and have user rights.

1.8.1 Phase 1

This phase of the submittal process is controlled solely by the prime

contractor. The submittal may be initiated by the QCM or subcontractors. The QCM shall review all comments from this phase, along with his/her review, and either reject the submittal, re-starting the submittal process, or cause the program to initiate Phase 2.

Notifications for a submittal in this phase shall not be sent to any Government reviewer. The QCM, within the submittal program, shall have the ability to reject the submittal and restart the submittal process if found non-compliant with the contract. Contractors (both the Prime Contractor and subcontractors) may only view the COR's review to avoid conflicts with review comments. (ACO/COR review completed in Phase 3)

1.8.2 Phase 2

Notifications shall be sent to applicable reviewers after the completion of the QCM's review in Phase 1. All submittals shall be sent to the Resident/Field Office. Notifications are to be sent to other reviewers as applicable. For example, notifications are sent to the "DO/AE" and "CxA" only when submittals are designated "DO/AE" and "CxA", as required by submittal register or applicable specification section.

1.8.3 Phase 3

The COR (or ACO) shall receive a notification that all reviews have been completed for the submittal. The COR shall be able to view all previous review comments in a single file or screen and add comments as necessary. The COR will choose a review code and provide applicable comments. Only comments and the review code released by the COR constitute the official Government review.

1.9 GOVERNMENT APPROVED SUBMITTALS

Where the review authority is designated to the Government, the Contractor is required to sign the certification on the ENG Form 4025 in the box beside the remarks block in Section I. The submittal is not considered accepted until the COR or ACO has signed the ENG 4025.

1.10 INFORMATION ONLY SUBMITTALS

The Contractor is required to sign the certification on the ENG Form 4025. Any submittal without a submittal classification/designation found in either the Submittal Register or the applicable specification is considered to be an information only submittal.

Normally submittals for information only will not be returned. Approval of the Contracting Officer is not required on information only submittals. The Government reserves the right to require the Contractor to resubmit any item found not to comply with the contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications; will not prevent the Contracting Officer from requiring removal and replacement of nonconforming material incorporated in the work; and does not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe.

1.11 PROJECT SUBMITTAL REGISTER

A sample Project Submittal Register showing items of equipment and

materials for when submittals are required by the specifications is provided. as "Attachement 3 - Submittal Register."

1.11.1 Submittal Management

Prepare and maintain a submittal register, as the work progresses. Do not change data that is output in columns (c), (d), (e), and (f) as delivered by Government; retain data that is output in columns (a), (g), (h), and (i) as approved. As an attachment, provide a submittal register showing items of equipment and materials for which submittals are required by the specifications. This list may not be all-inclusive and additional submittals may be required. Maintain a submittal register for the project in accordance with Section 01 45 00.15 10 RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE(RMS CM). The Government will provide the initial submittal register in electronic format with the following fields completed, to the extent that will be required by the Government during subsequent usage.

Column (c): Lists specification section in which submittal is required.

Column (d): Lists each submittal description (SD Number. and type, e.g., SD-02 Shop Drawings) required in each specification section.

Column (e): Lists one principal paragraph in each specification section where a material or product is specified. This listing is only to facilitate locating submitted requirements. Do not consider entries in column (e) as limiting the project requirements.

Thereafter, the Contractor is to track all submittals by maintaining a complete list, including completion of all data columns and all dates on which submittals are received by and returned by the Government.

1.11.2 Design-Build Submittal Register

1.11.3 Preconstruction Use of Submittal Register

Submit the submittal register. Include the QC plan and the project schedule. Verify that all submittals required for the project are listed and add missing submittals. Coordinate and complete the following fields on the register submitted with the QC plan and the project schedule:

Column (a) Activity Number: Activity number from the project schedule.

Column (g) Contractor Submit Date: Scheduled date for the approving authority to receive submittals.

Column (h) Contractor Approval Date: Date that Contractor needs approval of submittal.

Column (i) Contractor Material: Date that Contractor needs material delivered to Contractor control.

1.11.4 Contractor Use of Submittal Register

Update the following fields in the Government-furnished submittal register program or equivalent fields in the program used by the Contractor with each submittal throughout the contract.

Column (b) Transmittal Number: List of consecutive, Contractor-assigned numbers.

Column (j) Action Code (k): Date of action used to record Contractor's review when forwarding submittals to QC.

Column (l) Date submittal transmitted.

Column (q) Date approval was received.

1.11.5 Approving Authority Use of Submittal Register

Update the following fields:

Column (b) Transmittal Number: List of consecutive, Contractor-assigned numbers.

Column (l) Date submittal was received.

Column (m) through (p) Dates of review actions.

Column (q) Date of return to Contractor.

1.11.6 Action Codes

1.11.6.1 Contractor Action Codes

DESIGN BID BUILD SUBMITTALS			
Submittal Classifications shown in UFGS Sections	Submittal Classification	Corresponding SpecsIntact Submittal Register Code which is populated in the SI Submittal Register. Software Limitations: (The software shows one character delineation in the SpecsIntact Submittal Register)	RMS - The following Submittal Classifications are populated in RMS when the SpecsIntact Submittal Data File is pulled into RMS)
G	Submittal requires Government	G	GA
BLANK	Submittal is For Information Only (FIO)	BLANK	FIO

DESIGN BID BUILD SUBMITTALS			
S	Submittal is for documentation of Sustainable requirements	S	S/FIO

1.11.7 Delivery of Copies

Submit an updated electronic copy of the submittal register to the Contracting Officer with each invoice request. Provide an updated Submittal Register monthly regardless of whether an invoice is submitted.

1.12 VARIATIONS

Variations from contract requirements require Contracting Officer approval pursuant to contract Clause FAR 52.236-21 Specifications and Drawings for Construction, and will be considered where advantageous to the Government.

1.12.1 Considering Variations

Discussion of variations with the Contracting Officer before submission will help ensure that functional and quality requirements are met and minimize rejections and resubmittals. When contemplating a variation that results in lower cost, consider submission of the variation as a Value Engineering Change Proposal (VECP).

Specifically point out variations from contract requirements in transmittal letters. Failure to point out variations may cause the Government to require rejection and removal of such work at no additional cost to the Government.

1.12.2 Proposing Variations

When proposing variation, deliver a written request to the Contracting Officer, with documentation of the nature and features of the variation and why the variation is desirable and beneficial to Government. Include the DOR's written analysis and approval. If lower cost is a benefit, also include an estimate of the cost savings. In addition to documentation required for variation, include the submittals required for the item. Clearly mark the proposed variation in all documentation.

Check the column "variation" of ENG Form 4025 for submittals that include variations proposed by the Contractor. Set forth in writing the reason for any variations and note such variations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted variations.

1.12.3 Warranting that Variations are Compatible

When delivering a variation for approval, the Contractor warrants that this contract has been reviewed to establish that the variation, if incorporated, will be compatible with other elements of work.

1.12.4 Review Schedule Extension

In addition to the normal submittal review period, a period of 14 calendar

days will be allowed for the Government to consider submittals with variations.

1.13 SCHEDULING

Schedule and submit concurrently product data and shop drawings covering component items forming a system or items that are interrelated. Submit pertinent certifications at the same time. No delay damages or time extensions will be allowed for time lost in late submittals.

- a. Coordinate scheduling, sequencing, preparing, and processing of submittals with performance of work so that work will not be delayed by submittal processing. The Contractor is responsible for additional time required for Government reviews resulting from required resubmittals. The review period for each resubmittal is the same as for the initial submittal.
- b. Submittals required by the contract documents are listed on the submittal register. If a submittal is listed in the submittal register but does not pertain to the contract work, the Contractor is to include the submittal in the register and annotate it "N/A" with a brief explanation. Approval by the Contracting Officer does not relieve the Contractor of supplying submittals required by the contract documents but that have been omitted from the register or marked "N/A."
- c. Resubmit the submittal register and annotate it monthly with actual submission and approval dates. When all items on the register have been fully approved, no further resubmittal is required.

Contracting Officer review will be completed within 30 calendar days after the date of submission.

1.13.1 Government Reviewed Design

1.14 GOVERNMENT APPROVING AUTHORITY

When the approving authority is the Contracting Officer, the Government will:

- a. Note the date on which the submittal was received.
- b. Review submittals for approval within the scheduling period specified and only for conformance with project design concepts and compliance with contract documents.
- c. Identify returned submittals with one of the actions defined in paragraph REVIEW NOTATIONS and with comments and markings appropriate for the action indicated.

Upon completion of review of submittals requiring Government approval, stamp and date submittals. Two copies of the submittal will be retained by the Contracting Officer and two copies of the submittal will be returned to the Contractor. If the Government performs a conformance review of other Designer of Record approved submittals, the submittals will be identified and returned, as described above.

1.14.1 Review Notations

Submittals will be returned to the Contractor with the following notations:

- a. Submittals marked "approved" or "accepted" authorize proceeding with the work covered.
- b. Submittals marked "approved as noted" or "approved, except as noted, resubmittal not required," authorize proceeding with the work covered provided that the Contractor takes no exception to the corrections.
- c. Submittals marked "not approved," "disapproved," or "revise and resubmit" indicate incomplete submittal or noncompliance with the contract requirements or design concept. Resubmit with appropriate changes. Do not proceed with work for this item until the resubmittal is approved.
- d. Submittals marked "not reviewed" indicate that the submittal has been previously reviewed and approved, is not required, does not have evidence of being reviewed and approved by Contractor, or is not complete. A submittal marked "not reviewed" will be returned with an explanation of the reason it is not reviewed. Resubmit submittals returned for lack of review by Contractor or for being incomplete, with appropriate action, coordination, or change.
- e. Submittals marked "receipt acknowledged" indicate that submittals have been received by the Government. This applies only to "information-only submittals" as previously defined.

1.15 DISAPPROVED SUBMITTALS

Make corrections required by the Contracting Officer. If the Contractor considers any correction or notation on the returned submittals to constitute a change to the contract drawings or specifications, give notice to the Contracting Officer as required under the FAR clause titled CHANGES. The Contractor is responsible for the dimensions and design of connection details and the construction of work. Failure to point out variations may cause the Government to require rejection and removal of such work at the Contractor's expense.

If changes are necessary to submittals, make such revisions and resubmit in accordance with the procedures above. No item of work requiring a submittal change is to be accomplished until the changed submittals are approved.

1.16 APPROVED SUBMITTALS

The Contracting Officer's approval of submittals is not to be construed as a complete check, and indicates only that the general method of construction, materials, detailing, and other information are satisfactory. The design, general method of construction, materials, detailing, and other information appear to meet the Solicitation and Accepted Proposal.

Approval or acceptance by the Government for a submittal does not relieve the Contractor of the responsibility for meeting the contract requirements or for any error that may exist, because under the Quality Control (QC) requirements of this contract, the Contractor is responsible for ensuring information contained within each submittal accurately conforms with the requirements of the contract documents.

After submittals have been approved or accepted by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.17 APPROVED SAMPLES

Approval of a sample is only for the characteristics or use named in such approval and is not be construed to change or modify any contract requirements. Before submitting samples, provide assurance that the materials or equipment will be available in quantities required in the project. No change or substitution will be permitted after a sample has been approved.

Match the approved samples for materials and equipment incorporated in the work. If requested, approved samples, including those that may be damaged in testing, will be returned to the Contractor, at its expense, upon completion of the contract. Unapproved samples will also be returned to the Contractor at its expense, if so requested.

Failure of any materials to pass the specified tests will be sufficient cause for refusal to consider, under this contract, any further samples of the same brand or make as that material. The Government reserves the right to disapprove any material or equipment that has previously proved unsatisfactory in service.

Samples of various materials or equipment delivered on the site or in place may be taken by the Contracting Officer for testing. Samples failing to meet contract requirements will automatically void previous approvals. Replace such materials or equipment to meet contract requirements.

1.18 WITHHOLDING OF PAYMENT

Payment for materials incorporated in the work will not be made if required approvals have not been obtained. No payment for materials incorporated in the work will be made unless all required DOR approvals or required Government approvals have been obtained. No payment will be made for any materials incorporated into the work for any conformance review submittals or information-only submittals found to contain errors or deviations from the Solicitation or Accepted Proposal.

1.19 STAMPS

Certify the submittal data as follows on Form ENG 4025: "I certify that the above submitted items had been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as otherwise stated.

_____ NAME OF CONTRACTOR _____ SIGNATURE OF CONTRACTOR

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

Attachments

1. ENG 4025 - Submittal Transmittal Form
 2. ENG 4026 - Routing of Shop Drawings Equipment Data Material Samples
or Manufacturer's Certificates of Compliance for Approval
 3. Submittal Register
- End of Section --

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SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION

Kanopolis Repaint Bridge Superstructure

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					REMARKS	
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		MAILED TO CONTR/ DATE RCD FRM APPR AUTH
		01 11 00	SD-01 Preconstruction Submittals Work Plan	1.3	G DO												
		01 32 16.00 23	SD-01 Preconstruction Submittals Baseline Construction Schedule	1.2	G												
			SD-07 Certificates Monthly Updates	1.4	G C												
		01 33 00	SD-01 Preconstruction Submittals Submittal Register	1.11	G RO												
		01 35 13	SD-01 Preconstruction Submittals Certified Bridge Inspector Certificates	1.2.1	G DO												
			Bridge Inspection Plan (BIP)	1.2	G DO												
		01 35 26	SD-01 Preconstruction Submittals Accident Prevention Plan (APP) Scaffolding Plan	1.6 3.3.2	G DO G DO												
			SD-06 Test Reports Notifications and Reports	1.11													
			Accident Reports	1.11.2	G DO												
			Lhe Inspection Reports	1.11.3	G DO												
			SD-07 Certificates Crane Operators/Riggers	1.5.1.4													
			Standard Lift Plan	1.6.2.1	G DO												
			Critical Lift Plan	1.6.2.2	G DO												
			Activity Hazard Analysis (AHA)	1.7													
			Certificate of Compliance	1.11.4													
		01 45 00.00 10	SD-01 Preconstruction Submittals														

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION

Kanopolis Repaint Bridge Superstructure

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH #	GOVT CLASSIFICATION REVIEW	CONTRACTOR SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY				REMARKS		
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		DATE OF ACTION	MAILED TO CONTR/ DATE RCD FRM APPR AUTH
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		01 45 00.00 10	Contractor Quality Control (CQC) Plan	3.2	G DO												
			SD-06 Test Reports														
			Verification Statement	3.9.2	G DO												
		01 50 00	SD-01 Preconstruction Submittals														
			Construction Site Plan	1.3	G RO												
			Bridge Utilization Plan	1.4	G DO												
		01 57 19	SD-01 Preconstruction Submittals														
			Regulatory Notifications	1.7.2	G RO												
			Environmental Protection Plan	1.8	G DO												
			Employee Training Records	1.7.5	G DO												
			Environmental Manager	1.7.4	G DO												
			Qualifications														
			SD-07 Certificates														
			Employee Training Records	1.7.5	G RO												
			SD-11 Closeout Submittals														
			Waste Determination	3.7.1	G RO												
			Documentation														
			Disposal Documentation for Hazardous and Regulated Waste	3.7.3.3	G RO												
			Hazardous Waste/Debris Management	3.7.3.1	G RO												
			Regulatory Notifications	1.7.2	G RO												
			Sales Documentation	3.7.2.1	G RO												
		01 74 19	SD-01 Preconstruction Submittals														

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION

Kanopolis Repaint Bridge Superstructure

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH #	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY				MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS	
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE			DATE OF ACTION
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		01 74 19	Construction Waste Management Plan	1.6	G RO												
			SD-11 Closeout Submittals														
			Final Construction Waste Diversion Report	1.8	G RO												
		01 78 00	SD-03 Product Data														
			Warranty Management Plan	1.5.1													
			SD-11 Closeout Submittals														
			As-Built Drawings	3.1	G RO												
			Record Drawings	3.2	G RO												
			As-Built Record of Equipment and Materials	1.5.1													
			As-Built Record of Equipment and Materials	3.4													
			Construction Contract Specifications	3.3	G RO												
			Certification of EPA Designated Items	2.2	G RO												
		05 12 00	SD-01 Preconstruction Submittals														
			Rivet Fabrication Drawings	1.3.1	G DO												
			SD-02 Shop Drawings														
			Fabrication Drawings	1.3.1	G DO												
			SD-06 Test Reports														
			Bolts, Nuts, and Washers	2.2	G RO												
			SD-07 Certificates														
			Bolts, Nuts, and Washers	2.2	G RO												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION Kanopolis Repaint Bridge Superstructure						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					REMARKS	
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		MAILED TO CONTR/ DATE RCD FRM APPR AUTH
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		05 12 00	Galvanizing	2.4	G RO												
		09 97 02	SD-01 Preconstruction Submittals														
			Safety, Health, and Environmental Requirements	1.3	G DO												
			Safety Plan	1.3.1	G RO												
			Confined Spaces Plan	1.3.1.6	G DO												
			Respiratory Protection Plan	1.3.1.7	G DO												
			Airborne Sampling Plan	1.3.2.1	G DO												
			Ventilation Assessment Plan	1.3.1	G DO												
			Medical Surveillance Plan	1.3.2	G DO												
			Worker Protection Plan	1.3.2.3	G DO												
			Environmental Protection Plan	1.3.3	G DO												
			Waste Manifest	1.3.3.1	G RO												
			Waste Disposal Plan	1.3.3.1	G DO												
			Containment Plan	1.3.3.2	G DO												
			Water Quality Plan	1.3.3.4	G DO												
			Soil Quality Plan	1.3.3.5	G DO												
			Lead Compliance Plan	1.3.1.3	G DO												
			SD-03 Product Data														
			Manufacturer's Product Data Sheet	Part 2	G DO												
			SD-04 Samples														
			Paint Products	2.1	G DO												
			SD-06 Test Reports														
			Soil Quality Test Report	1.3.3.5	G DO												
			Inspection Reports	3.5	G DO												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION

Kanopolis Repaint Bridge Superstructure

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY				MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS	
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE			DATE OF ACTION
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		09 97 02	Medical Status Report	1.3.2.3	G DO												
			Change in Medical Status Report	1.3.2.4	G DO												
			Air Monitoring Test Plan	1.3.2.1	G RO												
			Air Monitoring Test Report	1.3.2.1	G DO												
			SD-07 Certificates														
			Certified EHS Professional	1.5.1	G DO												
			Certified Lead Laboratory	1.5.2	G DO												
			SSPC QP 1 Certificate	1.5.3	G DO												
			SSPC QP 2 Certificate	1.5.4	G DO												
			Qualified Hazardous Paint Removal Contractor	1.5.4	G DO												
			Coating Thickness Gage Qualification	1.5.6	G DO												
			Qualified Paint Applicator	1.5.5	G DO												

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SECTION 01 35 13

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SECTION 01 35 13

SPECIAL PROJECT PROCEDURES
11/20, CHG 1: 02/22

PART 1 GENERAL

This specification Section provides detailed information of site and project requirements that are or may be necessary for successful completion of the project. In addition to all specifications, the contract drawings and reference drawing sets must be used and followed to obtain complete project requirements.

The sequence of operations shall be maintained so that the maximum amount of work may be done under favorable working conditions in accordance with the completion time set.

1.1 SUBMITTALS

Government approval is required for submittals with a "G" classification. Submittals not having a "G" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Certified Bridge Inspector Certificates; G, DO

Bridge Inspection Plan (BIP); G, DO

1.2 STEEL MEMBERS AND RIVETED CONNECTIONS INSPECTION

Upon completion of media blasting of bridge superstructure, the Contractor shall use a Certified Bridge Inspector for the inspection of all steel members and riveted connections via visual (VT) and sounding methods. As discussed in the 09 97 02 (3.2.2), the contractor has 8-hours to prime all cleaned (media blasted) surfaces after media-blasting. It is suggested the contractor phase/sequence the media blasting to one span at a time to allow time for the inspector to inspect immediately following the completion of blasting. The contractor should plan for replacement of an estimated 10% of the total rivets with high strength bolts and nuts meeting the requirements of the 05 12 00 specification if the inspector determines they need replaced based on the evaluation criteria requirements below and detailed in S-002. If the inspection and or necessary repairs exceed the 8-hour period, the superstructure will be required to be media blasted and cleaned again prior to primer application. The bridge inspection plan (BIP) should contain the inspector scope of work, inspector access, rivet repair plan, inspector stamped report, and description of how the completed plan is to be executed. The BIP should be coordinated and submitted in coordination with the bridge utilization plan in specification 01 50 00.

1.2.1 Bridge Inspector Qualifications

The Contractor shall obtain the services of a Certified Bridge Inspector, certified to have successfully passed the U.S. Department of Transportation - Federal Highway Administration (FHWA) and National Highway Institute (NHI)

Safety Inspection of In-Service Bridges two-week course, and has subsequently attended a certified refresher course every 5-years following the date of certification as required to maintain certification. The Inspector(s) shall have a minimum of 2-years' experience inspecting rivet connections and performed inspection of three similar types of bridges via inspection by visual (VT) and NDT methods by physically hitting suspect rivet heads perpendicular to shaft (A.K.A. sounding) suspect rivets using a 40 OZ. hammer and listening for varying tones to determine if rivets are sound. Submit copies of certified bridge inspector certificates showing evidence of qualifications for bridge inspector(s).

PART 2 PRODUCTS

2.1 Not used.

PART 3 EXECUTION

3.1 INSPECTION EVALUATION CRITERIA

Rivets shall be replaced if they fail to meet any one of these criteria in addition to using the details and tables in S-002.

1. Replace rivet if there is separation between the sound metal surfaces of either rivet head and the riveted parts.
2. Replace rivet if the rivet visually appears to be loose for any reason. Rivets visually suspect of being loose shall be confirmed loose if it can be felt to move after being struck on the side of the head in a direction approximately perpendicular to its shank with a 40 oz hammer. The impact with hammer shall be hard enough to hear if rivet is loose or deteriorated.
3. Replace rivet if section loss is equal to or greater than the diagram shown on S-002. The engineer shall be consulted if unclear as to the rivet loading condition or use the section loss criteria for "unknown" loading condition. For rivets with irregular section loss, contact the contracting officer for direction. In general, shear loading mainly applies to the diagonals and their respective connections to the upper and bottom chords of the bridge. Conversely, tension loading mainly applies to the floor beam to bottom chord connections of the bridge. See bridge drawings attached to contract drawings for reference.

3.2 RIVET INSPECTION AND REPLACEMENT AND STRUCTURAL MEMBER INSPECTIONS

1. Existing rivets to remain on members and/or gussets being painted shall be evaluated after field preparation for painting is completed and shall be removed and replaced in accordance with the rivet evaluation criteria shown on sheet S-002. New high strength (h.S.) Bolts shall be installed and tensioned in accordance with specification 05 12 00, and prepared for paint in accordance with specification 09 97 02.
2. Bolts shall conform to ASTM F3125 GR A325. Bolts replacing rivets shall have a diameter matching the diameter of the rivet they replace. Existing Holes may be reamed to the rivet diameter plus 1/8" maximum to facilitate Bolt installation if needed.

3. Unless otherwise shown in the plans or approved by the engineer, only one rivet may be removed and replaced at a time at any connection. The replacement bolt shall be fully installed and tensioned before the next rivet may be removed.

4. Prior to starting any rivet removal, the contractor shall submit a working drawing as part of the BIP detailing proposed rivet removal methods to the contracting officer for engineer review. Acceptance will require demonstration by the contractor to ensure no damage will occur to the existing member to remain. No flame cutting methods will be permitted on any structural members in tension. Use of a gas cutting torch with a scarfing tip will be permitted only for problematic rivet removal and only after approval has been obtained from the contracting officer.

5. Rivet camming - a condition where the rivet hole is not straight as a result of mis-aligned plates. Reaming of the holes may be necessary for correcting and cleaning hole.

6. The bridge inspector shall inspect all bridge structural members. If a suspected crack is found, the bridge inspector should perform NDT using a dye penetration test kit, etc. To confirm suspicion.

7. Special attention will be made concerning gusset and cover plates for signs of pack rust, distortion from overload, and section loss. Member thickness should be verified using NDT methods such as a D-meter or calipers and compared to thickness in original drawings.

8. The bridge inspector shall provide a signed/stamped report within 60-days of completion of bridge inspection per the BIP documenting all defects with clear labeling of all members and joints. The report should include location of defect(s), photos, and summary report with recommendations.

3.3 COORDINATION WITH THE GOVERNMENT

The Contractor shall cooperate and coordinate his work with Kanopolis lake personnel as required for orderly completion of all work. In the event of disagreement between the Contractor and others, the decision of the Contracting Officer shall be final. Other contractors on U.S. Government work (including Government personnel) may be working in the area during the life of this contract. The Contractor shall coordinate his work with others to avoid undue interference and shall conduct his operation within the limits of the assigned construction area or construction right-of-way limits.

The Contractor shall provide the Government with a minimum notice of 4 weeks prior to desired commencement of work on the service bridge. The Contractor shall provide the Government with the date access to the service bridge is required and maximum duration of work to be performed. The Contractor shall inform the Project Lake Manager of scheduled work on site prior to each mobilization to the dam.

3.4 COORDINATION OF GOVERNMENT OPERATING EQUIPMENT

The Contractor's employees shall not open, close, or tamper with switches, valves, or control devices for existing installed equipment. Only Government operating personnel will be authorized to operate government equipment. The Contractor's work operations shall be coordinated and

scheduled to reduce the amount of time for performance of this contract to a minimum.

3.5 GOVERNMENT-FURNISHED EQUIPMENT AND MAINTENANCE

Use of Government equipment or property not specifically mentioned herein or shown on the drawings shall be subject to approval.

3.6 PAYMENT

No separate measurement or payment will be made for work referred to in this section. All costs of operations herewith shall be considered a subsidiary obligation of the contractor to be included in the applicable contract unit price.

-- End of Section --

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SECTION 01 35 26

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SECTION 01 35 26

GOVERNMENTAL SAFETY REQUIREMENTS
11/15, CHG 2/22

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME B30.3	(2016) Tower Cranes
ASME B30.5	(2018) Mobile and Locomotive Cranes
ASME B30.8	(2015) Floating Cranes and Floating Derricks
ASME B30.9	(2018) Slings
ASME B30.20	(2018) Below-the-Hook Lifting Devices
ASME B30.22	(2016) Articulating Boom Cranes
ASME B30.26	(2015; INT Jun 2010 - Jun 2014) Rigging Hardware

AMERICAN SOCIETY OF SAFETY PROFESSIONALS (ASSP)

ASSP A10.34	(2001; R 2012) Protection of the Public on or Adjacent to Construction Sites
ASSP Z359.0	(2012) Definitions and Nomenclature Used for Fall Protection and Fall Arrest
ASSP Z359.1	(2016) The Fall Protection Code
ASSP Z359.2	(2017) Minimum Requirements for a Comprehensive Managed Fall Protection Program
ASSP Z359.3	(2017) Safety Requirements for Lanyards and Positioning Lanyards
ASSP Z359.4	(2013) Safety Requirements for Assisted-Rescue and Self-Rescue Systems, Subsystems and Components
ASSP Z359.6	(2016) Specifications and Design Requirements for Active Fall Protection Systems
ASSP Z359.7	(2011) Qualification and Verification

Testing of Fall Protection Products

- ASSP Z359.11 (2014) Safety Requirements for Full Body Harnesses
- ASSP Z359.12 (2009) Connecting Components for Personal Fall Arrest Systems
- ASSP Z359.13 (2013) Personal Energy Absorbers and Energy Absorbing Lanyards
- ASSP Z359.14 (2014) Safety Requirements for Self-Retracting Devices for Personal Fall Arrest and Rescue Systems
- ASSP Z359.15 (2014) Safety Requirements for Single Anchor Lifelines and Fall Arresters for Personal Fall Arrest Systems

ASTM INTERNATIONAL (ASTM)

- ASTM F855 (2015) Standard Specifications for Temporary Protective Grounds to Be Used on De-energized Electric Power Lines and Equipment

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

- IEEE 1048 (2003) Guide for Protective Grounding of Power Lines
- IEEE C2 (2017; Errata 1-2 2017; INT 1 2017) National Electrical Safety Code

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

- NFPA 10 (2018; TIA 18-1) Standard for Portable Fire Extinguishers
- NFPA 70 (2017; ERTA 1-2 2017; TIA 17-1; TIA 17-2; TIA 17-3; TIA 17-4; TIA 17-5; TIA 17-6; TIA 17-7; TIA 17-8; TIA 17-9; TIA 17-10; TIA 17-11; TIA 17-12; TIA 17-13; TIA 17-14; TIA 17-15; TIA 17-16; TIA 17-17) National Electrical Code
- NFPA 70E (2018; TIA 18-1; TIA 81-2) Standard for Electrical Safety in the Workplace
- NFPA 241 (2019) Standard for Safeguarding Construction, Alteration, and Demolition Operations

U.S. ARMY CORPS OF ENGINEERS (USACE)

- EM 385-1-1 (2019) Safety and Health Requirements Manual

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910	Occupational Safety and Health Standards
29 CFR 1910.147	The Control of Hazardous Energy (Lock Out/Tag Out)
29 CFR 1926	Safety and Health Regulations for Construction
29 CFR 1926.16	Rules of Construction
29 CFR 1926.450	Scaffolds
29 CFR 1926.500	Fall Protection
29 CFR 1926.1400	Cranes and Derricks in Construction

1.2 DEFINITIONS

1.2.1 Competent Person (CP)

The CP is a person designated in writing, who, through training, knowledge and experience, is capable of identifying, evaluating, and addressing existing and predictable hazards in the working environment or working conditions that are dangerous to personnel, and who has authorization to take prompt corrective measures with regards to such hazards.

1.2.2 Competent Person, Fall Protection

The CP, Fall Protection, is a person meeting the competent person requirements as defined in EM 385-1-1 Appendix Q and in accordance with ASSP Z359.0, who has been designated in writing by the employer to be responsible for immediate supervising, implementing and monitoring of the fall protection program, who through training, knowledge and experience in fall protection and rescue systems and equipment, is capable of identifying, evaluating and addressing existing and potential fall hazards and, who has the authority to take prompt corrective measures with regard to such hazards.

1.2.3 Competent Person, Scaffolding

The CP, Scaffolding is a person meeting the competent person requirements in EM 385-1-1 Appendix Q, and designated in writing by the employer to be responsible for immediate supervising, implementing and monitoring of the scaffolding program. The CP for Scaffolding has enough training, knowledge and experience in scaffolding to correctly identify, evaluate and address existing and potential hazards and also has the authority to take prompt corrective measures with regard to these hazards. CP qualifications must be documented and include experience on the specific scaffolding systems/types being used, assessment of the base material that the scaffold will be erected upon, load calculations for materials and personnel, and erection and dismantling. The CP for scaffolding must have a documented, minimum of 8-hours of scaffold training to include training on the specific type of scaffold being used (e.g. mast-climbing, adjustable, tubular frame), in accordance with EM 385-1-1 Section 22.B.02.

1.2.4 Competent Person (CP) Trainer

A competent person trainer as defined in EM 385-1-1 Appendix Q, who is qualified in the material presented, and who possesses a working knowledge of applicable technical regulations, standards, equipment and systems related to the subject matter on which they are training Competent Persons. A competent person trainer must be familiar with the typical hazards and the equipment used in the industry they are instructing. The training provided by the competent person trainer must be appropriate to that specific industry. The competent person trainer must evaluate the knowledge and skills of the competent persons as part of the training process.

1.2.5 High Risk Activities

High Risk Activities are activities that involve work at heights, crane and rigging, excavations and trenching, scaffolding, electrical work, and confined space entry.

1.2.6 High Visibility Accident

A High Visibility Accident is any mishap which may generate publicity or high visibility.

1.2.7 Load Handling Equipment (LHE)

LHE is a term used to describe cranes, hoists and all other hoisting equipment (hoisting equipment means equipment, including crane, derricks, hoists and power operated equipment used with rigging to raise, lower or horizontally move a load).

1.2.8 Medical Treatment

Medical Treatment is treatment administered by a physician or by registered professional personnel under the standing orders of a physician. Medical treatment does not include first aid treatment even when provided by a physician or registered personnel.

1.2.9 Near Miss

A Near Miss is a mishap resulting in no personal injury and zero property damage, but given a shift in time or position, damage or injury may have occurred (e.g., a worker falls off a scaffold and is not injured; a crane swings around to move the load and narrowly misses a parked vehicle).

1.2.10 Operating Envelope

The Operating Envelope is the area surrounding any crane or load handling equipment. Inside this "envelope" is the crane, the operator, riggers and crane walkers, other personnel involved in the operation, rigging gear between the hook, the load, the crane's supporting structure (i.e. ground or rail), the load's rigging path, the lift and rigging procedure.

1.2.11 Qualified Person (QP)

The QP is a person designated in writing, who, by possession of a recognized degree, certificate, or professional standing, or extensive knowledge, training, and experience, has successfully demonstrated their ability to solve or resolve problems related to the subject matter, the

work, or the project.

1.2.12 Qualified Person, Fall Protection (QP for FP)

A QP for FP is a person meeting the requirements of EM 385-1-1 Appendix Q, and ASSP Z359.0, with a recognized degree or professional certificate and with extensive knowledge, training and experience in the fall protection and rescue field who is capable of designing, analyzing, and evaluating and specifying fall protection and rescue systems.

1.2.13 USACE Property and Equipment

Interpret "USACE" property and equipment specified in USACE EM 385-1-1 as Government property and equipment.

1.2.14 Load Handling Equipment (LHE) Accident or Load Handling Equipment Mishap

A LHE accident occurs when any one or more of the eight elements in the operating envelope fails to perform correctly during operation, including operation during maintenance or testing resulting in personnel injury or death; material or equipment damage; dropped load; derailment; two-blocking; overload; or collision, including unplanned contact between the load, crane, or other objects. A dropped load, derailment, two-blocking, overload and collision are considered accidents, even though no material damage or injury occurs. A component failure (e.g., motor burnout, gear tooth failure, bearing failure) is not considered an accident solely due to material or equipment damage unless the component failure results in damage to other components (e.g., dropped boom, dropped load, or roll over). Document an LHE mishap using the Crane High Hazard working group mishap reporting form.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Accident Prevention Plan (APP); G, DO

Scaffolding Plan; G,DO

SD-06 Test Reports

Notifications and Reports

Submit reports as their incidence occurs, in accordance with the requirements of the paragraph, "Notifications and Reports."

Accident Reports; G, DO

Lhe Inspection Reports; G, DO

SD-07 Certificates

Crane Operators/Riggers

Standard Lift Plan; G, DO

Critical Lift Plan ; G, DO

Activity Hazard Analysis (AHA)

Certificate of Compliance

1.4 REGULATORY REQUIREMENTS

In addition to the detailed requirements included in the provisions of this contract, comply with the most recent edition of USACE EM 385-1-1, and the following federal, state, and local laws, ordinances, criteria, rules and regulations. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirements govern.

1.5 SITE QUALIFICATIONS, DUTIES, AND MEETINGS

1.5.1 Personnel Qualifications

1.5.1.1 Site Safety and Health Officer (SSHO)

Provide an SSHO that meets the requirements of EM 385-1-1 Section 1. The SSHO must ensure that the requirements of 29 CFR 1926.16 are met for the project. Provide a Safety oversight team that includes a minimum of one (1) person at each project site to function as the Site Safety and Health Officer (SSHO). The SSHO or an equally-qualified Alternate SSHO must be at the work site at all times to implement and administer the Contractor's safety program and government-accepted Accident Prevention Plan. The SSHO and Alternate SSHO must have the required training, experience, and qualifications in accordance with EM 385-1-1 Section 01.A.17, and all associated sub-paragraphs.

If the SSHO is off-site for a period longer than 24 hours, an equally-qualified alternate SSHO must be provided and must fulfill the same roles and responsibilities as the primary SSHO. When the SSHO is temporarily (up to 24 hours) off-site, a Designated Representative (DR), as identified in the AHA may be used in lieu of an Alternate SSHO, and must be on the project site at all times when work is being performed. Note that the DR is a collateral duty safety position, with safety duties in addition to their full time occupation.

1.5.1.1.1 Additional Site Safety and Health Officer (SSHO) Requirements and Duties

The SSHO may also serve as the Superintendent.

1.5.1.2 Competent Person Qualifications

Provide Competent Persons in accordance with EM 385-1-1, Appendix Q and herein. Competent Persons for high risk activities include confined space,

cranes and rigging, excavation/trenching, fall protection, and electrical work. The CP for these activities must be designated in writing, and meet the requirements for the specific activity (i.e. competent person, fall protection).

The Competent Person identified in the Contractor's Safety and Health Program and accepted Accident Prevention Plan, must be on-site at all times when the work that presents the hazards associated with their professional expertise is being performed. Provide the credentials of the Competent Persons(s) to the the Contracting Officer for information in consultation with the Safety Office.

1.5.1.2.1 Competent Person for Scaffolding

Provide a Competent Person for Scaffolding who meets the requirements of EM 385-1-1, Section 22.B.02 and herein.

1.5.1.2.2 Competent Person for Fall Protection

Provide a Competent Person for Fall Protection who meets the requirements of EM 385-1-1, Section 21.C.04, 21.B.03, and herein.

1.5.1.3 Qualified Trainer Requirements

Individuals qualified to instruct the 40 hour contract safety awareness course, or portions thereof, must meet the definition of a Competent Person Trainer, and, at a minimum, possess a working knowledge of the following subject areas: EM 385-1-1, Electrical Standards, Lockout/Tagout, Fall Protection, Confined Space Entry for Construction; Excavation, Trenching and Soil Mechanics, and Scaffolds in accordance with 29 CFR 1926.450, Subpart L.

Instructors are required to:

- a. Prepare class presentations that cover construction-related safety requirements.
- b. Ensure that all attendees attend all sessions by using a class roster signed daily by each attendee. Maintain copies of the roster for at least five (5) years. This is a certification class and must be attended 100 percent. In cases of emergency where an attendee cannot make it to a session, the attendee can make it up in another class session for the same subject.
- c. Update training course materials whenever an update of the EM 385-1-1 becomes available.
- d. Provide a written exam of at least 50 questions. Students are required to answer 80 percent correctly to pass.
- e. Request, review and incorporate student feedback into a continuous course improvement program.

1.5.1.4 Crane Operators/Riggers

Provide Operators, Signal Persons, and Riggers meeting the requirements in EM 385-1-1 and Signal Persons. Provide proof of current qualification.

1.5.2 Personnel Duties

1.5.2.1 Duties of the Site Safety and Health Officer (SSHO)

The SSHO must:

- a. Conduct daily safety and health inspections and maintain a written log which includes area/operation inspected, date of inspection, identified hazards, recommended corrective actions, estimated and actual dates of corrections. Attach safety inspection logs to the Contractors' daily production report.
- b. Conduct mishap investigations and complete required accident reports. Report mishaps and near misses.
- c. Use and maintain OSHA's Form 300 to log work-related injuries and illnesses occurring on the project site for Prime Contractors and subcontractors, and make available to the Contracting Officer upon request. Post and maintain the Form 300A on the site Safety Bulletin Board.
- d. Maintain applicable safety reference material on the job site.
- e. Attend the pre-construction conference, pre-work meetings including preparatory meetings, and periodic in-progress meetings.
- f. Review the APP and AHAs for compliance with EM 385-1-1, and approve, sign, implement and enforce them.
- g. Establish a Safety and Occupational Health (SOH) Deficiency Tracking System that lists and monitors outstanding deficiencies until resolution.
- h. Ensure subcontractor compliance with safety and health requirements.
- i. Maintain a list of hazardous chemicals on site and their material Safety Data Sheets (SDS).
- j. Maintain a weekly list of high hazard activities involving energy, equipment, excavation, entry into confined space, and elevation, and be prepared to discuss details during QC Meetings.
- k. Provide and keep a record of site safety orientation and indoctrination for Contractor employees, subcontractor employees, and site visitors.

Superintendent, QC Manager, and SSHO are subject to dismissal if the above duties are not being effectively carried out. If Superintendent, QC Manager, or SSHO are dismissed, project work will be stopped and will not be allowed to resume until a suitable replacement is approved and the above duties are again being effectively carried out.

1.5.3 Meetings

1.5.3.1 Preconstruction Conference

- a. Contractor representatives who have a responsibility or significant role in accident prevention on the project must attend the preconstruction conference. This includes the project superintendent, Site Safety and Occupational Health officer, quality control manager,

or any other assigned safety and health professionals who participated in the development of the APP (including the Activity Hazard Analyses (AHAs) and special plans, program and procedures associated with it).

- b. Discuss the details of the submitted APP to include incorporated plans, programs, procedures and a listing of anticipated AHAs that will be developed and implemented during the performance of the contract. This list of proposed AHAs will be reviewed at the conference and an agreement will be reached between the Contractor and the Contracting Officer as to which phases will require an analysis. In addition, establish a schedule for the preparation, submittal, and Government review of AHAs to preclude project delays.
- c. Deficiencies in the submitted APP, identified during the Contracting Officer's review, must be corrected, and the APP re-submitted for review prior to the start of construction. Work is not permitted to begin until an APP is established that is acceptable to the Contracting Officer.

1.5.3.2 Safety Meetings

Conduct safety meetings to review past activities, plan for new or changed operations, review pertinent aspects of appropriate AHA (by trade), establish safe working procedures for anticipated hazards, and provide pertinent Safety and Occupational Health (SOH) training and motivation. Conduct meetings at least once a month for all supervisors on the project location. The SSHO, supervisors, foremen, or CDSOs must conduct meetings at least once a week for the trade workers. Document meeting minutes to include the date, persons in attendance, subjects discussed, and names of individual(s) who conducted the meeting. Maintain documentation on-site and furnish copies to the Contracting Officer on request. Notify the Contracting Officer of all scheduled meetings 7 calendar days in advance.

1.6 ACCIDENT PREVENTION PLAN (APP)

A qualified person must prepare the written site-specific APP. Prepare the APP in accordance with the format and requirements of EM 385-1-1, Appendix A, and as supplemented herein. Cover all paragraph and subparagraph elements in EM 385-1-1, Appendix A. The APP must be job-specific and address any unusual or unique aspects of the project or activity for which it is written. The APP must interface with the Contractor's overall safety and health program referenced in the APP in the applicable APP element, and made site-specific. Describe the methods to evaluate past safety performance of potential subcontractors in the selection process. Also, describe innovative methods used to ensure and monitor safe work practices of subcontractors. The Government considers the Prime Contractor to be the "controlling authority" for all work site safety and health of the subcontractors. Contractors are responsible for informing their subcontractors of the safety provisions under the terms of the contract and the penalties for noncompliance, coordinating the work to prevent one craft from interfering with or creating hazardous working conditions for other crafts, and inspecting subcontractor operations to ensure that accident prevention responsibilities are being carried out. The APP must be signed by an officer of the firm (Prime Contractor senior person), the individual preparing the APP, the on-site superintendent, the designated SSHO, the Contractor Quality Control Manager, and any designated Certified Safety Professional (CSP) or Certified Health Physicist (CIH). The SSHO must

provide and maintain the APP and a log of signatures by each subcontractor foreman, attesting that they have read and understand the APP, and make the APP and log available on-site to the Contracting Officer. If English is not the foreman's primary language, the Prime Contractor must provide an interpreter.

Submit the APP to the Contracting Officer 15 calendar days prior to the date of the preconstruction conference for acceptance. Work cannot proceed without an accepted APP. Once reviewed and accepted by the Contracting Officer, the APP and attachments will be enforced as part of the contract. Disregarding the provisions of this contract or the accepted APP is cause for stopping of work, at the discretion of the Contracting Officer, until the matter has been rectified. Continuously review and amend the APP, as necessary, throughout the life of the contract. Changes to the accepted APP must be made with the knowledge and concurrence of the Contracting Officer, project superintendent, SSHO and Quality Control Manager. Incorporate unusual or high-hazard activities not identified in the original APP as they are discovered. Should any severe hazard exposure (i.e. imminent danger) become evident, stop work in the area, secure the area, and develop a plan to remove the exposure and control the hazard. Notify the Contracting Officer within 24 hours of discovery. Eliminate and remove the hazard. In the interim, take all necessary action to restore and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public (as defined by ASSP A10.34), and the environment.

1.6.1 Names and Qualifications

Provide plans in accordance with the requirements outlined in Appendix A of EM 385-1-1, including the following:

- a. Names and qualifications (resumes including education, training, experience and certifications) of site safety and health personnel designated to perform work on this project to include the designated Site Safety and Health Officer and other competent and qualified personnel to be used. Specify the duties of each position.
- b. Qualifications of competent and of qualified persons. As a minimum, designate and submit qualifications of competent persons for each of the following major areas: excavation; scaffolding; fall protection; hazardous energy; confined space; health hazard recognition, evaluation and control of chemical, physical and biological agents; and personal protective equipment and clothing to include selection, use and maintenance.

1.6.2 Plans

Provide plans in the APP in accordance with the requirements outlined in Appendix A of EM 385-1-1, including the following:

1.6.2.1 Standard Lift Plan (SLP)

Plan lifts to avoid situations where the operator cannot maintain safe control of the lift. Prepare a written SLP in accordance with EM 385-1-1, Section 16.A.03, using Form 16-2 for every lift or series of lifts (if duty cycle or routine lifts are being performed). The SLP must be developed, reviewed and accepted by all personnel involved in the lift in conjunction with the associated AHA. Signature on the AHA constitutes acceptance of the plan. Maintain the SLP on the LHE for the current lift(s) being made.

Maintain historical SLPs for a minimum of 3 months.

1.6.2.2 Critical Lift Plan - Crane or Load Handling Equipment

Provide a Critical Lift Plan as required by EM 385-1-1, Section 16.H.01, using Form 16-3. In addition, Critical Lift Plans are required for the following:

- a. Lifts over 50 percent of the capacity of barge mounted mobile crane's hoist.
- b. When working around energized power lines where the work will get closer than the minimum clearance distance in EM 385-1-1 Table 16-1.
- c. For lifts with anticipated binding conditions.
- d. When erecting cranes.

1.6.2.2.1 Critical Lift Plan Planning and Schedule

Critical lifts require detailed planning and additional or unusual safety precautions. Develop and submit a critical lift plan to the Contracting Officer 30 calendar days prior to critical lift. Comply with load testing requirements in accordance with EM 385-1-1, Section 16.F.03.

1.6.2.2.2 Lifts of Personnel

In addition to the requirements of EM 385-1-1, Section 16.H.02, for lifts of personnel, demonstrate compliance with the requirements of 29 CFR 1926.1400 and EM 385-1-1, Section 16.T.

1.6.2.3 Multi-Purpose Machines, Material Handling Equipment, and Construction Equipment Lift Plan

Multi-purpose machines, material handling equipment, and construction equipment used to lift loads that are suspended by rigging gear, require proof of authorization from the machine OEM that the machine is capable of making lifts of loads suspended by rigging equipment. Written approval from a qualified registered professional engineer, after a safety analysis is performed, is allowed in lieu of the OEM's approval. Demonstrate that the operator is properly trained and that the equipment is properly configured to make such lifts and is equipped with a load chart.

1.6.2.4 Fall Protection and Prevention (FP&P) Plan

The plan must comply with the requirements of EM 385-1-1, Section 21.D and ASSP Z359.2, be site specific, and address all fall hazards in the work place and during different phases of construction. Address how to protect and prevent workers from falling to lower levels when they are exposed to fall hazards above 6 feet. A competent person or qualified person for fall protection must prepare and sign the plan documentation. Include fall protection and prevention systems, equipment and methods employed for every phase of work, roles and responsibilities, assisted rescue, self-rescue and evacuation procedures, training requirements, and monitoring methods. Review and revise, as necessary, the Fall Protection and Prevention Plan documentation as conditions change, but at a minimum every six months, for lengthy projects, reflecting any changes during the course of construction due to changes in personnel, equipment, systems or work habits. Keep and maintain the accepted Fall Protection and Prevention Plan documentation at

the job site for the duration of the project. Include the Fall Protection and Prevention Plan documentation in the Accident Prevention Plan (APP).

1.6.2.5 Rescue and Evacuation Plan

Provide a Rescue and Evacuation Plan in accordance with EM 385-1-1 Section 21.N and ASSP Z359.2, and include in the FP&P Plan and as part of the APP. Include a detailed discussion of the following: methods of rescue; methods of self-rescue; equipment used; training requirement; specialized training for the rescuers; procedures for requesting rescue and medical assistance; and transportation routes to a medical facility.

1.7 ACTIVITY HAZARD ANALYSIS (AHA)

Before beginning each activity, task or Definable Feature of Work (DFOW) involving a type of work presenting hazards not experienced in previous project operations, or where a new work crew or subcontractor is to perform the work, the Contractor(s) performing that work activity must prepare an AHA. AHAs must be developed by the Prime Contractor, subcontractor, or supplier performing the work, and provided for Prime Contractor review and approval before submitting to the Contracting Officer. AHAs must be signed by the SSHO, Superintendent, QC Manager and the subcontractor Foreman performing the work. Format the AHA in accordance with EM 385-1-1, Section 1 or as directed by the Contracting Officer. Submit the AHA for review at least 15 working days prior to the start of each activity task, or DFOW. The Government reserves the right to require the Contractor to revise and resubmit the AHA if it fails to effectively identify the work sequences, specific anticipated hazards, site conditions, equipment, materials, personnel and the control measures to be implemented.

AHAs must identify competent persons required for phases involving high risk activities, including confined entry, crane and rigging, excavations, trenching, electrical work, fall protection, and scaffolding.

1.7.1 AHA Management

Review the AHA list periodically (at least monthly) at the Contractor supervisory safety meeting, and update as necessary when procedures, scheduling, or hazards change. Use the AHA during daily inspections by the SSHO to ensure the implementation and effectiveness of the required safety and health controls for that work activity.

1.7.2 AHA Signature Log

Each employee performing work as part of an activity, task or DFOW must review the AHA for that work and sign a signature log specifically maintained for that AHA prior to starting work on that activity. The SSHO must maintain a signature log on site for every AHA. Provide employees whose primary language is other than English, with an interpreter to ensure a clear understanding of the AHA and its contents.

1.8 DISPLAY OF SAFETY INFORMATION

1.8.1 Safety Bulletin Board

Within one calendar day(s) after commencement of work, erect a safety bulletin board at the job site. Where size, duration, or logistics of project do not facilitate a bulletin board, an alternative method, acceptable to the Contracting Officer, that is accessible and includes all

mandatory information for employee and visitor review, may be deemed as meeting the requirement for a bulletin board. Include and maintain information on safety bulletin board as required by EM 385-1-1, Section 01.A.07. Additional items required to be posted include:

1.8.2 Safety and Occupational Health (SOH) Deficiency Tracking System

Establish a SOH deficiency tracking system that lists and monitors the status of SOH deficiencies in chronological order. Use the tracking system to evaluate the effectiveness of the APP. A monthly evaluation of the data must be discussed in the QC or SOH meeting with everyone on the project. The list must be posted on the project bulletin board and updated daily, and provide the following information:

- a. Date deficiency identified;
- b. Description of deficiency;
- c. Name of person responsible for correcting deficiency;
- d. Projected resolution date;
- e. Date actually resolved.

1.9 SITE SAFETY REFERENCE MATERIALS

Maintain safety-related references applicable to the project, including those listed in paragraph REFERENCES. Maintain applicable equipment manufacturer's manuals.

1.10 EMERGENCY MEDICAL TREATMENT

Contractors must arrange for their own emergency medical treatment in accordance with EM 385-1-1. Government has no responsibility to provide emergency medical treatment.

1.11 NOTIFICATIONS and REPORTS

1.11.1 Mishap Notification

Notify the Contracting Officer as soon as practical, but no more than twenty-four hours, after any mishaps, including recordable accidents, incidents, and near misses, as defined in EM 385-1-1 Appendix Q, any report of injury, illness, or any property damage. For LHE or rigging mishaps, notify the Contracting Officer as soon as practical but not more than 4 hours after mishap. The Contractor is responsible for obtaining appropriate medical and emergency assistance and for notifying fire, law enforcement, and regulatory agencies. Immediate reporting is required for electrical mishaps, to include Arc Flash; shock; uncontrolled release of hazardous energy (includes electrical and non-electrical); load handling equipment or rigging; fall from height (any level other than same surface); and underwater diving. These mishaps must be investigated in depth to identify all causes and to recommend hazard control measures.

Within notification include Contractor name; contract title; type of contract; name of activity, installation or location where accident occurred; date and time of accident; names of personnel injured; extent of

property damage, if any; extent of injury, if known, and brief description of accident (for example, type of construction equipment used and PPE used). Preserve the conditions and evidence on the accident site until the Government investigation team arrives on-site and Government investigation is conducted. Assist and cooperate fully with the Government's investigation(s) of any mishap.

1.11.2 Accident Reports

- a. Conduct an accident investigation for recordable injuries and illnesses, property damage, and near misses as defined in EM 385-1-1, to establish the root cause(s) of the accident. Complete the applicable USACE Accident Report Form 3394, and provide the report to the Contracting Officer within 5 calendar day(s) of the accident. The Contracting Officer will provide copies of any required or special forms.
- b. Near Misses: Near miss reports are considered positive and proactive Contractor safety management actions.
- c. Conduct an accident investigation for any load handling equipment accident (including rigging accidents) to establish the root cause(s) of the accident. Complete the LHE Accident Report (Crane and Rigging Accident Report) form and provide the report to the Contracting Officer within 30 calendar days of the accident. Do not proceed with crane operations until cause is determined and corrective actions have been implemented to the satisfaction of the Contracting Officer. The Contracting Officer will provide a blank copy of the accident report form.

1.11.3 LHE Inspection Reports

Submit LHE inspection reports required in accordance with EM 385-1-1 and as specified herein with Daily Reports of Inspections.

1.11.4 Certificate of Compliance and Pre-lift Plan/Checklist for LHE and Rigging

Provide a FORM 16-1 Certificate of Compliance for LHE entering an activity under this contract and in accordance with EM 385-1-1. Post certifications on the crane.

Develop a Standard Lift Plan (SLP) in accordance with EM 385-1-1, Section 16.H.03 using Form 16-2 Standard Pre-Lift Crane Plan/Checklist for each lift planned. Submit SLP to the Contracting Officer for approval within 15 calendar days in advance of planned lift.

1.12 SEVERE STORM PLAN

In the event that a severe storm is forecasted and/or anticipated, the Contractor must:

- a. Secure outside equipment and materials and place materials that could be damaged in protected areas.
- b. Check surrounding area, including roof, for loose material, equipment, debris, and other objects that could be blown away or against existing facilities.

- c. Ensure that temporary erosion controls are adequate.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 CONSTRUCTION AND OTHER WORK

Comply with EM 385-1-1, NFPA 70, NFPA 70E, NFPA 241, the APP, the AHA, Federal and State OSHA regulations, and other related submittals and activity fire and safety regulations. The most stringent standard prevails.

PPE is governed in all areas by the nature of the work the employee is performing. Use personal hearing protection at all times in designated noise hazardous areas or when performing noise hazardous tasks. Safety glasses must be worn or carried/available on each person. Mandatory PPE includes:

- a. Hard Hat
- b. Long Pants
- c. Appropriate Safety Shoes
- d. Appropriate Class Reflective Vests

3.1.1 Worksite Communication

Employees working alone in a remote location or away from other workers must be provided an effective means of emergency communications (i.e., cellular phone, two-way radios, land-line telephones or other acceptable means). The selected communication must be readily available (easily within the immediate reach) of the employee and must be tested prior to the start of work to verify that it effectively operates in the area/environment. An employee check-in/check-out communication procedure must be developed to ensure employee safety.

3.1.2 Hazardous Material Exclusions

Notwithstanding any other hazardous material used in this contract, radioactive materials or instruments capable of producing ionizing/non-ionizing radiation (with the exception of radioactive material and devices used in accordance with EM 385-1-1 such as nuclear density meters for compaction testing and laboratory equipment with radioactive sources) as well as materials which contain asbestos, mercury or polychlorinated biphenyls, di-isocyanates, lead-based paint, and hexavalent chromium, are prohibited. The Contracting Officer, upon written request by the Contractor, may consider exceptions to the use of any of the above excluded materials. Low mercury lamps used within fluorescent lighting fixtures are allowed as an exception without further Contracting Officer approval. Notify the Radiation Safety Officer (RSO) prior to excepted items of radioactive material and devices being brought on base.

3.1.3 Unforeseen Hazardous Material

Contract documents identify materials such as PCB, lead paint, and friable and non-friable asbestos and other OSHA regulated chemicals (i.e. 29 CFR

Part 1910.1000). If material(s) that may be hazardous to human health upon disturbance are encountered during construction operations, stop that portion of work and notify the Contracting Officer immediately. Within 14 calendar days the Government will determine if the material is hazardous. If material is not hazardous or poses no danger, the Government will direct the Contractor to proceed without change. If material is hazardous and handling of the material is necessary to accomplish the work, the Government will issue a modification pursuant to FAR 52.243-4 Changes and FAR 52.236-2 Differing Site Conditions.

3.2 FALL PROTECTION PROGRAM

Establish a fall protection program, for the protection of all employees exposed to fall hazards. Within the program include company policy, identify roles and responsibilities, education and training requirements, fall hazard identification, prevention and control measures, inspection, storage, care and maintenance of fall protection equipment and rescue and evacuation procedures in accordance with ASSP Z359.2 and EM 385-1-1, Sections 21.A and 21.D.

3.2.1 Training

Institute a fall protection training program. As part of the Fall Protection Program, provide training for each employee who might be exposed to fall hazards. Provide training by a competent person for fall protection in accordance with EM 385-1-1, Section 21.C. Document training and practical application of the competent person in accordance with EM 385-1-1, Section 21.C.04 and ASSP Z359.2 in the AHA.

3.2.2 Fall Protection Equipment and Systems

Enforce use of personal fall protection equipment and systems designated (to include fall arrest, restraint, and positioning) for each specific work activity in the Site Specific Fall Protection and Prevention Plan and AHA at all times when an employee is exposed to a fall hazard. Protect employees from fall hazards as specified in EM 385-1-1, Section 21.

Provide personal fall protection equipment, systems, subsystems, and components that comply with EM 385-1-1 Section 21.I, 29 CFR 1926.500 Subpart M, ASSP Z359.0, ASSP Z359.1, ASSP Z359.2, ASSP Z359.3, ASSP Z359.4, ASSP Z359.6, ASSP Z359.7, ASSP Z359.11, ASSP Z359.12, ASSP Z359.13, ASSP Z359.14, and ASSP Z359.15.

3.2.2.1 Additional Personal Fall Protection

In addition to the required fall protection systems, other protection such as safety skiffs, personal floatation devices, and life rings, are required when working above or next to water in accordance with EM 385-1-1, Sections 21.0 through 21.0.06. Personal fall protection systems and equipment are required when working from an articulating or extendible boom, swing stages, or suspended platform. In addition, personal fall protection systems are required when operating other equipment such as scissor lifts. The need for tying-off in such equipment is to prevent ejection of the employee from the equipment during raising, lowering, travel, or while performing work.

3.2.2.2 Personal Fall Protection Harnesses

Only a full-body harness with a shock-absorbing lanyard or self-retracting

lanyard is an acceptable personal fall arrest body support device. The use of body belts is not acceptable. Harnesses must have a fall arrest attachment affixed to the body support (usually a Dorsal D-ring) and specifically designated for attachment to the rest of the system. Snap hooks and carabineers must be self-closing and self-locking, capable of being opened only by at least two consecutive deliberate actions and have a minimum gate strength of 3,600 lbs in all directions. Use webbing, straps, and ropes made of synthetic fiber. The maximum free fall distance when using fall arrest equipment must not exceed 6 feet, unless the proper energy absorbing lanyard is used. Always take into consideration the total fall distance and any swinging of the worker (pendulum-like motion), that can occur during a fall, when attaching a person to a fall arrest system. All full body harnesses must be equipped with Suspension Trauma Preventers such as stirrups, relief steps, or similar in order to provide short-term relief from the effects of orthostatic intolerance in accordance with EM 385-1-1, Section 21.I.06.

The contractor will provide safety harnesses for all necessary government employees compatible with their fall arrest system. The contracting officer and/or the contracting officer's representative shall determine what government personnel require such equipment.

3.2.3 Horizontal Lifelines (HLL)

Provide HLL in accordance with EM 385-1-1, Section 21.I.08.d.2. Commercially manufactured horizontal lifelines (HLL) must be designed, installed, certified and used, under the supervision of a qualified person, for fall protection as part of a complete fall arrest system which maintains a safety factor of 2 (29 CFR 1926.500). The competent person for fall protection may (if deemed appropriate by the qualified person) supervise the assembly, disassembly, use and inspection of the HLL system under the direction of the qualified person. Locally manufactured HLLs are not acceptable unless they are custom designed for limited or site specific applications by a Registered Professional Engineer who is qualified in designing HLL systems.

3.2.4 Guardrails and Safety Nets

Design, install and use guardrails and safety nets in accordance with EM 385-1-1, Section 21.F.01 and 29 CFR 1926 Subpart M.

3.2.5 Rescue and Evacuation Plan and Procedures

When personal fall arrest systems are used, ensure that the mishap victim can self-rescue or can be rescued promptly should a fall occur. Prepare a Rescue and Evacuation Plan and include a detailed discussion of the following: methods of rescue; methods of self-rescue or assisted-rescue; equipment used; training requirement; specialized training for the rescuers; procedures for requesting rescue and medical assistance; and transportation routes to a medical facility. Include the Rescue and Evacuation Plan within the Activity Hazard Analysis (AHA) for the phase of work, in the Fall Protection and Prevention (FP&P) Plan, and the Accident Prevention Plan (APP). The plan must comply with the requirements of EM 385-1-1, ASSP Z359.2, and ASSP Z359.4.

3.3 WORK PLATFORMS

3.3.1 Scaffolding

Provide employees with a safe means of access to the work area on the scaffold. Climbing of any scaffold braces or supports not specifically designed for access is prohibited. Comply with the following requirements:

- a. Scaffold platforms greater than 20 feet in height must be accessed by use of a scaffold stair system.
- b. Ladders commonly provided by scaffold system manufacturers are prohibited for accessing scaffold platforms greater than 20 feet maximum in height.
- c. An adequate gate is required.
- d. Employees performing scaffold erection and dismantling must be qualified.
- e. Scaffold must be capable of supporting at least four times the maximum intended load, and provide appropriate fall protection as delineated in the accepted fall protection and prevention plan.
- f. Stationary scaffolds must be attached to structural building components to safeguard against tipping forward or backward.
- g. Special care must be given to ensure scaffold systems are not overloaded.
- h. Side brackets used to extend scaffold platforms on self-supported scaffold systems for the storage of material are prohibited. The first tie-in must be at the height equal to 4 times the width of the smallest dimension of the scaffold base.
- i. Scaffolding other than suspended types must bear on base plates upon wood mudsills (2 in x 10 in x 8 in minimum) or other adequate firm foundation.
- j. Scaffold or work platform erectors must have fall protection during the erection and dismantling of scaffolding or work platforms that are more than 6 feet.
- k. Delineate fall protection requirements when working above 6 feet or above dangerous operations in the Fall Protection and Prevention (FP&P) Plan and Activity Hazard Analysis (AHA) for the phase of work.

3.3.2 Scaffolding Plan

A qualified person must prepare the written site-specific scaffolding plan. Prepare the scaffolding plan in accordance with the reequipments of EM 385-1-1 and as supplemented herein. The scaffolding plan must be job-specific and address any unusual or unique aspects of the project or activity for which it is written. The scaffolding plan must interface with the Contractor's overall safety and health program reference in the APP in the applicable APP element, and made site-specific. Provide designation and qualifications for Competent Person, Scaffolding in writing. The scaffolding plan must layout exactly how scaffolding is to be erected

around bridge in a non-destructive manner.

Submit the scaffolding plan to the Contracting Officer 15 calendar days prior to the construction start date. Work cannot proceed without an accepted scaffolding plan. Once reviewed and accepted by the Contracting Officer, the scaffolding plan will be enforced as part of the contract.

3.3.3 Elevated Aerial Work Platforms (AWPs)

Workers must be anchored to the basket or bucket in accordance with manufacturer's specifications and instructions (anchoring to the boom may only be used when allowed by the manufacturer and permitted by the CP). Lanyards used must be sufficiently short to prohibit worker from climbing out of basket. The climbing of rails is prohibited. Lanyards with built-in shock absorbers are acceptable. Self-retracting devices are not acceptable. Tying off to an adjacent pole or structure is not permitted unless a safe device for 100 percent tie-off is used for the transfer.

Use of AWPs must be operated, inspected, and maintained as specified in the operating manual for the equipment and delineated in the AHA. Operators of AWPs must be designated as qualified operators by the Prime Contractor. Maintain proof of qualifications on site for review and include in the AHA.

3.4 EQUIPMENT

3.4.1 Material Handling Equipment (MHE)

- a. Material handling equipment such as forklifts must not be modified with work platform attachments for supporting employees unless specifically delineated in the manufacturer's printed operating instructions. Material handling equipment fitted with personnel work platform attachments are prohibited from traveling or positioning while personnel are working on the platform.
- b. The use of hooks on equipment for lifting of material must be in accordance with manufacturer's printed instructions. Material Handling Equipment Operators must be trained in accordance with OSHA 29 CFR 1910, Subpart N.
- c. Operators of forklifts or power industrial trucks must be licensed in accordance with OSHA.

3.4.2 Load Handling Equipment (LHE)

The following requirements apply. In exception, these requirements do not apply to commercial truck mounted and articulating boom cranes used solely to deliver material and supplies (not prefabricated components, structural steel, or components of a systems-engineered metal building) where the lift consists of moving materials and supplies from a truck or trailer to the ground; to cranes installed on mechanics trucks that are used solely in the repair of shore-based equipment; to crane that enter the activity but are not used for lifting; nor to other machines not used to lift loads suspended by rigging equipment. However, LHE accidents occurring during such operations must be reported.

- a. Equip cranes and derricks as specified in EM 385-1-1, Section 16.
- b. Notify the Contracting Officer 15 working days in advance of any LHE

entering the activity, in accordance with EM 385-1-1, Section 16.A.02, so that necessary quality assurance spot checks can be coordinated. Contractor's operator must remain with the crane during the spot check. Rigging gear must comply with OSHA, ASME B30.9 Standards safety standards.

- c. Comply with the LHE manufacturer's specifications and limitations for erection and operation of cranes and hoists used in support of the work. Perform erection under the supervision of a designated person (as defined in ASME B30.5). Perform all testing in accordance with the manufacturer's recommended procedures.
- d. Comply with ASME B30.5 for mobile and locomotive cranes, ASME B30.22 for articulating boom cranes, ASME B30.3 for construction tower cranes, ASME B30.8 for floating cranes and floating derricks, ASME B30.9 for slings, ASME B30.20 for below the hook lifting devices and ASME B30.26 for rigging hardware.
- e. When operating in the vicinity of overhead transmission lines, operators and riggers must be alert to this special hazard and follow the requirements of EM 385-1-1 Section 11, and ASME B30.5 or ASME B30.22 as applicable.
- f. Do not use crane suspended personnel work platforms (baskets) unless the Contractor proves that using any other access to the work location would provide a greater hazard to the workers or is impossible. Do not lift personnel with a line hoist or friction crane. Additionally, submit a specific AHA for this work to the Contracting Officer. Ensure the activity and AHA are thoroughly reviewed by all involved personnel.
- g. Inspect, maintain, and recharge portable fire extinguishers as specified in NFPA 10, Standard for Portable Fire Extinguishers.
- h. All employees must keep clear of loads about to be lifted and of suspended loads, except for employees required to handle the load.
- i. Use cribbing when performing lifts on outriggers.
- j. The crane hook/block must be positioned directly over the load. Side loading of the crane is prohibited.
- k. A physical barricade must be positioned to prevent personnel access where accessible areas of the LHE's rotating superstructure poses a risk of striking, pinching or crushing personnel.
- l. Maintain inspection records in accordance by EM 385-1-1, Section 16.D, including shift, monthly, and annual inspections, the signature of the person performing the inspection, and the serial number or other identifier of the LHE that was inspected. Records must be available for review by the Contracting Officer.
- m. Maintain written reports of operational and load testing in accordance with EM 385-1-1, Section 16.F, listing the load test procedures used along with any repairs or alterations performed on the LHE. Reports must be available for review by the Contracting Officer.
- n. Certify that all LHE operators have been trained in proper use of all safety devices (e.g. anti-two block devices).

- o. Take steps to ensure that wind speed does not contribute to loss of control of the load during lifting operations. At wind speeds greater than 20 mph, the operator, rigger and lift supervisor must cease all crane operations, evaluate conditions and determine if the lift may proceed. Base the determination to proceed or not on wind calculations per the manufacturer and a reduction in LHE rated capacity if applicable. Include this maximum wind speed determination as part of the activity hazard analysis plan for that operation.

3.4.3 Machinery and Mechanized Equipment

- a. Proof of qualifications for operator must be kept on the project site for review.
- b. Manufacture specifications or owner's manual for the equipment must be on-site and reviewed for additional safety precautions or requirements that are sometimes not identified by OSHA or USACE EM 385-1-1. Incorporate such additional safety precautions or requirements into the AHAs.

3.4.4 Use of Explosives

Explosives must not be used or brought to the project site.

3.5 ELECTRICAL

Perform electrical work in accordance with EM 385-1-1, Appendix A, Sections 11 and 12.

3.5.1 Conduct of Electrical Work

As delineated in EM 385-1-1, electrical work is to be conducted in a de-energized state unless there is no alternative method for accomplishing the work. In those cases obtain an energized work permit from the Contracting Officer. The energized work permit application must be accompanied by the AHA and a summary of why the equipment/circuit needs to be worked energized. Underground electrical spaces must be certified safe for entry before entering to conduct work. Cables that will be cut must be positively identified and de-energized prior to performing each cut. Attach temporary grounds in accordance with ASTM F855 and IEEE 1048. Perform all high voltage cable cutting remotely using hydraulic cutting tool. When racking in or live switching of circuit breakers, no additional person other than the switch operator is allowed in the space during the actual operation. Plan so that work near energized parts is minimized to the fullest extent possible. Use of electrical outages clear of any energized electrical sources is the preferred method.

When working in energized substations, only qualified electrical workers are permitted to enter. When work requires work near energized circuits as defined by NFPA 70, high voltage personnel must use personal protective equipment that includes, as a minimum, electrical hard hat, safety shoes, insulating gloves and electrical arc flash protection for personnel as required by NFPA 70E. Insulating blankets, hearing protection, and switching suits may also be required, depending on the specific job and as delineated in the Contractor's AHA. Ensure that each employee is familiar with and complies with these procedures and 29 CFR 1910.147.

3.5.2 Qualifications

Electrical work must be performed by QP personnel with verifiable credentials who are familiar with applicable code requirements. Verifiable credentials consist of State, National and Local Certifications or Licenses that a Master or Journeyman Electrician may hold, depending on work being performed, and must be identified in the appropriate AHA. Journeyman/Apprentice ratio must be in accordance with State, Local requirements applicable to where work is being performed.

3.5.3 Arc Flash

Conduct a hazard analysis/arc flash hazard analysis whenever work on or near energized parts greater than 50 volts is necessary, in accordance with NFPA 70E.

All personnel entering the identified arc flash protection boundary must be QPs and properly trained in NFPA 70E requirements and procedures. Unless permitted by NFPA 70E, no Unqualified Person is permitted to approach nearer than the Limited Approach Boundary of energized conductors and circuit parts. Training must be administered by an electrically qualified source and documented.

3.5.4 Grounding

Ground electrical circuits, equipment and enclosures in accordance with NFPA 70 and IEEE C2 to provide a permanent, continuous and effective path to ground unless otherwise noted by EM 385-1-1.

Check grounding circuits to ensure that the circuit between the ground and a grounded power conductor has a resistance low enough to permit sufficient current flow to allow the fuse or circuit breaker to interrupt the current.

3.5.5 Testing

Temporary electrical distribution systems and devices must be inspected, tested and found acceptable for Ground-Fault Circuit Interrupter (GFCI) protection, polarity, ground continuity, and ground resistance before initial use, before use after modification and at least monthly. Monthly inspections and tests must be maintained for each temporary electrical distribution system, and signed by the electrical CP or QP.

3.5.6 Hazardous Energy Control Plan (HECP)

Provide and operate a Hazardous Energy Control Program (HECP) in accordance with EM 385-1-1 Section 12, 29 CFR 1910.333, 29 CFR 1915.89, ASSP A10.44, NFPA 70E, and paragraph HAZARDOUS ENERGY CONTROL PROGRAM (HECP).

Safety Preparatory Inspection Coordination Meeting with the Government or Utility

For electrical distribution equipment that is to be operated by Government or Utility personnel, the Prime Contractor and the subcontractor performing the work must attend the safety preparatory inspection coordination meeting, which will also be attended by the Contracting Officer's Representative, and required by EM 385-1-1, Section 12.A.02. The meeting will occur immediately preceding the start of work and following the completion of the outage coordination meeting. Both the safety preparatory inspection coordination meeting and the outage coordination meeting must

occur prior to conducting the outage and commencing with lockout/tagout procedures.

Lockout/Tagout Isolation

Where the Government or Utility performs equipment isolation and lockout/tagout, the Contractor must place their own locks and tags on each energy-isolating device and proceed in accordance with the HECP. Before any work begins, both the Contractor and the Government or Utility must perform energy isolation verification testing while wearing required PPE detailed in the Contractor's AHA and required by EM 385-1-1, Sections 05.I and 11.B. Install personal protective grounds, with tags, to eliminate the potential for induced voltage in accordance with EM 385-1-1, Section 12.E.06.

Lockout/Tagout Removal

Upon completion of work, conduct lockout/tagout removal procedure in accordance with the HECP. In accordance with EM 385-1-1, Section 12.E.08, each lock and tag must be removed from each energy isolating device by the authorized individual or systems operator who applied the device. Provide formal notification to the Government (by completing the Government form if provided by Contracting Officer's Representative), confirming that steps of de-energization and lockout/tagout removal procedure have been conducted and certified through inspection and verification. Government or Utility locks and tags used to support the Contractor's work will not be removed until the authorized Government employee receives the formal notification.

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QUALITY CONTROL
11/16

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM D3740 (2019) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction

ASTM E329 (2018) Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection

1.2 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control program. Include all associated costs in the applicable Bid Schedule item.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Contractor Quality Control (CQC) Plan; G, DO

SD-06 Test Reports

Verification Statement; G, DO

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

Establish and maintain an effective quality control (QC) system that complies with FAR 52.246-12 Inspection of Construction. QC consist of

plans, procedures, and organization necessary to produce an end product which complies with the Contract requirements. The QC system covers all construction operations, both onsite and offsite, and be keyed to the proposed construction sequence. The project superintendent will be held responsible for the quality of work and is subject to removal by the Contracting Officer for non-compliance with the quality requirements specified in the Contract. In this context the highest level manager responsible for the overall construction activities at the site, including quality and production is the project superintendent. The project superintendent maintains a physical presence at the site at all times and is responsible for all construction and related activities at the site, except as otherwise acceptable to the Contracting Officer.

3.2 CONTRACTOR QUALITY CONTROL (CQC) PLAN

Submit no later than 10 days after receipt of notice to proceed, the Contractor Quality Control (CQC) Plan proposed to implement the requirements FAR 52.246-12 Inspection of Construction. The Government will consider an interim plan for the first 30 days of operation. Construction will be permitted to begin only after acceptance of the CQC Plan or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional work.

3.2.1 Content of the CQC Plan

Include, as a minimum, the following to cover all construction-operations, both onsite and offsite, including work by subcontractors fabricators, suppliers and purchasing agents:

- a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff will implement the three phase control system for all aspects of the work specified. Include a CQC System Manager that reports to an officer of the Prime Contractor.
- b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.
- c. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work which is not in compliance with the Contract. Letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities will be issued by the CQC System Manager. Furnish copies of these letters to the Contracting Officer.
- d. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, offsite fabricators, suppliers, and purchasing agents. These procedures must be in accordance with Section 01 33 00 SUBMITTAL PROCEDURES.
- e. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. (Laboratory facilities approved by the Contracting Officer are required to be used.)

- f. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.
- g. Procedures for tracking construction deficiencies from identification through acceptable corrective action. Establish verification procedures that identified deficiencies have been corrected.
- h. Reporting procedures, including proposed reporting formats.
- i. A list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks, has separate control requirements, and is identified by different trades or disciplines, or it is work by the same trade in a different environment. Although each section of the specifications can generally be considered as a definable feature of work, there are frequently more than one definable features under a particular section. This list will be agreed upon during the coordination meeting.

3.2.2 Acceptance of Plan

Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves the right to require the Contractor to make changes in the Contractor Quality Control (CQC) Plan and operations including removal of personnel, as necessary, to obtain the quality specified.

3.2.3 Notification of Changes

After acceptance of the CQC Plan, notify the Contracting Officer in writing of any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

3.3 COORDINATION MEETING

After the Preconstruction Conference, before start of construction, and prior to acceptance by the Government of the CQC Plan, meet with the Contracting Officer and discuss the Contractor's quality control system. Submit the CQC Plan a minimum of 7 calendar days prior to the Coordination Meeting. During the meeting, a mutual understanding of the system details must be developed, including the forms for recording the CQC operations, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting will be prepared by the Government, signed by both the Contractor and the Contracting Officer and will become a part of the contract file. There can be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings or address deficiencies in the CQC system or procedures which can require corrective action by the Contractor.

3.4 QUALITY CONTROL ORGANIZATION

3.4.1 Personnel Requirements

The requirements for the CQC organization are a Safety and Health Manager, CQC System Manager, and sufficient number of additional qualified personnel

to ensure safety and Contract compliance. The Safety and Health Manager reports directly to a senior project (or corporate) official independent from the CQC System Manager. The Safety and Health Manager will also serve as a member of the CQC Staff Personnel identified in the technical provisions as requiring specialized skills to assure the required work is being performed properly will also be included as part of the CQC organization. The Contractor's CQC staff maintains a presence at the site at all times during progress of the work and have complete authority and responsibility to take any action necessary to ensure Contract compliance. The CQC staff will be subject to acceptance by the Contracting Officer. Provide adequate office space, filing systems and other resources as necessary to maintain an effective and fully functional CQC organization. Promptly complete and furnish all letters, material submittals, shop drawing submittals, schedules and all other project documentation to the CQC organization. The CQC organization is responsible to maintain these documents and records at the site at all times, except as otherwise acceptable to the Contracting Officer.

3.4.2 CQC System Manager

Identify as CQC System Manager an individual within the onsite work organization that is responsible for overall management of CQC and has the authority to act in all CQC matters for the Contractor. The CQC System Manager is required to be a graduate engineer, graduate architect, or a graduate of construction management, with a minimum of 2 years construction experience on construction similar to this Contract. Or a construction person with a minimum of 5 years in related work. This CQC System Manager is on the site at all times during construction and is employed by the prime Contractor. The CQC System Manager must be assigned as System Manager. Identify in the plan an alternate to serve in the event of the CQC System Manager's absence. The requirements for the alternate are the same as the CQC System Manager.

3.4.3 Additional Requirement

In addition to the above experience and education requirements, the Contractor Quality Control (CQC) System Manager and Alternate CQC System Manager are required to have completed the Construction Quality Management (CQM) for Contractors course. If the CQC System Manager does not have a current certification, obtain the CQM for Contractors course certification within 90 days of award. This course is periodically offered by the Naval Facilities Engineering Command and the Army Corps of Engineers. Contact the Contracting Officer for information on the next scheduled class.

The Construction Quality Management Training certificate expires after 5 years. If the CQC System Manager's certificate has expired, retake the course to remain current.

3.4.4 Organizational Changes

Maintain the CQC staff at full strength at all times. When it is necessary to make changes to the CQC staff, revise the CQC Plan to reflect the changes and submit the changes to the Contracting Officer for acceptance.

3.5 SUBMITTALS AND DELIVERABLES

Submittals, if needed, have to comply with the requirements in Section 01 33 00 SUBMITTAL PROCEDURES. The CQC organization is responsible for certifying that all submittals and deliverables are in compliance with the

contract requirements.

3.6 CONTROL

CQC is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the contract. At least three phases of control are required to be conducted by the CQC System Manager for each definable feature of the construction work as follows:

3.6.1 Preparatory Phase

This phase is performed prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. This phase includes:

- a. A review of each paragraph of applicable specifications, reference codes, and standards. Make available during the preparatory inspection a copy of those sections of referenced codes and standards applicable to that portion of the work to be accomplished in the field. Maintain and make available in the field for use by Government personnel until final acceptance of the work.
- b. Review of the Contract drawings.
- c. Check to assure that all materials and equipment have been tested, submitted, and approved.
- d. Review of provisions that have been made to provide required control inspection and testing.
- e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the Contract.
- f. Examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
- g. Review of the appropriate activity hazard analysis to assure safety requirements are met.
- h. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.
- i. Check to ensure that the portion of the plan for the work to be performed has been accepted by the Contracting Officer.
- j. Discussion of the initial control phase.
- k. The Government needs to be notified at least 48 hours in advance of beginning the preparatory control phase. Include a meeting conducted by the CQC System Manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. Document the results of the preparatory phase actions by separate minutes prepared by the CQC System Manager and attach to the daily CQC report. Instruct applicable workers as to the acceptable level of workmanship required in order to meet contract

specifications.

3.6.2 Initial Phase

This phase is accomplished at the beginning of a definable feature of work. Accomplish the following:

- a. Check work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.
- b. Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing are in compliance with the contract.
- c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with required sample panels as appropriate.
- d. Resolve all differences.
- e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
- f. The Government needs to be notified at least 48 hours in advance of beginning the initial phase for definable feature of work. Prepare separate minutes of this phase by the CQC System Manager and attach to the daily CQC report. Indicate the exact location of initial phase for definable feature of work for future reference and comparison with follow-up phases.
- g. The initial phase for each definable feature of work is repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

3.6.3 Follow-up Phase

Perform daily checks to assure control activities, including control testing, are providing continued compliance with contract requirements, until completion of the particular feature of work. Record the checks in the CQC documentation. Conduct final follow-up checks and correct all deficiencies prior to the start of additional features of work which may be affected by the deficient work. Do not build upon nor conceal non-conforming work.

3.6.4 Additional Preparatory and Initial Phases

Conduct additional preparatory and initial phases on the same definable features of work if: the quality of on-going work is unacceptable; if there are changes in the applicable CQC staff, onsite production supervision or work crew; if work on a definable feature is resumed after a substantial period of inactivity; or if other problems develop.

3.7 TESTS

3.7.1 Testing Procedure

Perform specified or required tests to verify that control measures are adequate to provide a product which conforms to contract requirements.

Upon request, furnish to the Government duplicate samples of test specimens for possible testing by the Government. Testing includes operation and acceptance tests when specified. Procure the services of a Corps of Engineers approved testing laboratory or establish an approved testing laboratory at the project site. Perform the following activities and record and provide the following data:

- a. Verify that testing procedures comply with contract requirements.
- b. Verify that facilities and testing equipment are available and comply with testing standards.
- c. Check test instrument calibration data against certified standards.
- d. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.
- e. Record results of all tests taken, both passing and failing on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test. If approved by the Contracting Officer, actual test reports are submitted later with a reference to the test number and date taken. Provide an information copy of tests performed by an offsite or commercial test facility directly to the Contracting Officer. Failure to submit timely test reports as stated results in nonpayment for related work performed and disapproval of the test facility for this Contract.

3.7.2 Testing Laboratories

All testing laboratories must be validated by the USACE Material Testing Center (MTC) for the tests to be performed. Information on the USACE MTC with web-links to both a list of validated testing laboratories and for the laboratory inspection request for can be found at:
<https://mtc.erdcdren.mil/>.

3.7.2.1 Capability Check

The Government reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the contract specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for testing soils, concrete, asphalt, and steel is required to meet criteria detailed in ASTM D3740 and ASTM E329.

3.7.2.2 Capability Recheck

If the selected laboratory fails the capability check, each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory shall be borne by the Contractor.

3.7.3 Onsite Laboratory

The Government reserves the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests, and to check the Contractor's testing procedures, techniques, and test results at no additional cost to the Government.

3.8 COMPLETION INSPECTION

3.8.1 Punch-Out Inspection

Conduct an inspection of the work by the CQC System Manager near the end of the work, or any increment of the work established by a time stated in FAR 52.211-10 Commencement, Prosecution, and Completion of Work, or by the specifications. Prepare and include in the CQC documentation a punch list of items which do not conform to the approved drawings and specifications, as required by paragraph DOCUMENTATION. Include within the list of deficiencies the estimated date by which the deficiencies will be corrected. Make a second inspection the CQC System Manager or staff to ascertain that all deficiencies have been corrected. Once this is accomplished, notify the Government that the facility is ready for the Government Pre-Final inspection.

3.8.2 Pre-Final Inspection

The Government will perform the pre-final inspection to verify that the facility is complete and ready to be occupied. A Government Pre-Final Punch List may be developed as a result of this inspection. Ensure that all items on this list have been corrected before notifying the Government, so that a Final inspection with the customer can be scheduled. Correct any items noted on the Pre-Final inspection in a timely manner. These inspections and any deficiency corrections required by this paragraph need to be accomplished within the time slated for completion of the entire work or any particular increment of the work if the project is divided into increments by separate completion dates.

3.8.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the Contracting Officer's Representative is required to be in attendance at the final acceptance inspection. Additional Government personnel including, but not limited to, those from Base/Post Civil Facility Engineer user groups, and major commands can also be in attendance. The final acceptance inspection will be formally scheduled by the Contracting Officer based upon results of the Pre-Final inspection. Notify the Contracting Officer at least 14 days prior to the final acceptance inspection and include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining work performed under the Contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance FAR 52.246-12 Inspection of Construction.

3.9 DOCUMENTATION

3.9.1 Quality Control Activities

Maintain current records providing factual evidence that required quality control activities and tests have been performed. Include in these records the work of subcontractors and suppliers on an acceptable form that includes, as a minimum, the following information:

- a. The name and area of responsibility of the Contractor/Subcontractor.

- b. Operating plant/equipment with hours worked, idle, or down for repair.
- c. Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of work performed each day by NAS activity number.
- d. Test and control activities performed with results and references to specifications/drawings requirements. Identify the control phase (Preparatory, Initial, Follow-up). List of deficiencies noted, along with corrective action.
- e. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.
- f. Submittals and deliverables reviewed, with Contract reference, by whom, and action taken.
- g. Offsite surveillance activities, including actions taken.
- h. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
- i. Instructions given/received and conflicts in plans and specifications.

3.9.2 Verification Statement

Indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. Cover both conforming and deficient features and include a statement that equipment and materials incorporated in the work and workmanship comply with the Contract. Furnish the original and one copy of these records in report form to the Government daily within 24 hours after the date covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, prepare and submit one report for every 7 days of no work and on the last day of a no work period. All calendar days need to be accounted for throughout the life of the contract. The first report following a day of no work will be for that day only. Reports need to be signed and dated by the Contractor Quality Control (CQC) System Manager. Include copies of test reports and copies of reports prepared by all subordinate quality control personnel within the CQC System Manager Report.

3.10 SAMPLE FORMS

Sample forms will be provided upon request.

3.11 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. Take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, will be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the

Contracting Officer can issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders will be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

-- End of Section --

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RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE (RMS CM)
11/16

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this section to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2019) Safety and Health Requirements
Manual

1.2 MEASUREMENT AND PAYMENT

The work of this section is not measured for payment. The Contractor is responsible for the work of this section, without any direct compensation other than the payment received for contract items.

1.3 CONTRACT ADMINISTRATION

The Government will use the Resident Management System (RMS) to assist in its monitoring and administration of this contract. The Government accesses the system using the Government Mode of RMS (RMS GM) and the Contractor accesses the system using the Contractor Mode (RMS CM). The term RMS will be used in the remainder of this section for both RMS GM and RMS CM. The joint Government-Contractor use of RMS facilitates electronic exchange of information and overall management of the contract. The Contractor accesses RMS to record, maintain, input, track, and electronically share information with the Government throughout the contract period in the following areas:

Administration

Finances

Quality Control

Submittal Monitoring

Scheduling

Closeout

Import/Export of Data

1.3.1 Correspondence and Electronic Communications

For ease and speed of communications, exchange correspondence and other documents in electronic format to the maximum extent feasible. Some correspondence, including pay requests and payrolls, are also to be

provided in paper format with original signatures. Paper documents will govern, in the event of discrepancy with the electronic version.

1.3.2 Other Factors

Other portions of this document have a direct relationship to the reporting accomplished through RMS. Particular attention is directed to FAR 52.236-15 Schedules for Construction Contracts; FAR 52.232-27 Prompt Payment for Construction Contracts; FAR 52.232-5 Payments Under Fixed-Priced Construction Contracts; Section 01 32 01.00 10 PROJECT SCHEDULE; Section 01 33 00 SUBMITTAL PROCEDURES; Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS; and Section 01 45 00.00 10 QUALITY CONTROL.

1.4 RMS SOFTWARE

RMS is a web based application. Download, install and be able to utilize the latest version of RMS within 7 calendar days of receipt of the Notice to Proceed. RMS software, user manuals, access and installation instructions, program updates and training information are available from the RMS website (<https://rms.usace.army.mil>). The Government and the Contractor will have different access authorities to the same contract database through RMS. The common database will be updated automatically each time a user finalizes an entry or change.

1.5 CONTRACT DATABASE - GOVERNMENT

The Government will enter the basic contract award data in RMS prior to granting the Contractor access. The Government entries into RMS will generally be related to submittal reviews, correspondence status, and Quality Assurance(QA) comments, as well as other miscellaneous administrative information.

1.6 CONTRACT DATABASE - CONTRACTOR

Contractor entries into RMS establish, maintain, and update data throughout the duration of the contract. Contractor entries generally include prime and subcontractor information, daily reports, submittals, RFI's, schedule updates and payment requests. RMS includes the ability to import attachments and export reports in many of the modules, including submittals. The Contractor responsibilities for entries in RMS typically include the following items:

1.6.1 Administration

1.6.1.1 Contractor Information

Enter all current Contractor administrative data and information into RMS within 7 calendar days of receiving access to the contract in RMS. This includes, but is not limited to, Contractor's name, address, telephone numbers, management staff, and other required items.

1.6.1.2 Subcontractor Information

Enter all missing subcontractor administrative data and information into RMS CM within 7 calendar days of receiving access to the contract in RMS or within 7 calendar days of the signing of the subcontractor agreement for agreements signed at a later date. This includes name, trade, address, phone numbers, and other required information for all subcontractors. A

subcontractor is listed separately for each trade to be performed.

1.6.1.3 Correspondence

Identify all Contractor correspondence to the Government with a serial number. Prefix correspondence initiated by the Contractor's site office with "S". Prefix letters initiated by the Contractor's home (main) office with "H". Letters are numbered starting from 0001. (e.g., H-0001 or S-0001). The Government's letters to the Contractor will be prefixed with "C" or "RFP".

1.6.1.4 Equipment

Enter and maintain a current list of equipment planned for use or being used on the jobsite, including the most recent and planned equipment inspection dates.

1.6.1.5 Reports

Track the status of the project utilizing the reports available in RMS. The value of these reports is reflective of the quality of the data input. These reports include the Progress Payment Request worksheet, Quality Control (QC) comments, Submittal Register Status, and Three-Phase Control worksheets.

1.6.1.6 Request For Information (RFI)

Create and track all Requests For Information (RFI) in the RMS Administration Module for Government review and response.

1.6.2 Finances

1.6.2.1 Pay Activity Data

Develop and enter a list of pay activities in conjunction with the project schedule. The sum of pay activities equals the total contract amount, including modifications. Each pay activity must be assigned to a Contract Line Item Number (CLIN). The sum of the activities assigned to a CLIN equals the amount of each CLIN.

1.6.2.2 Payment Requests

Prepare all progress payment requests using RMS. Update the work completed under the contract at least monthly, measured as percent or as specific quantities. After the update, generate a payment request and prompt payment certification using RMS. Submit the signed prompt payment certification and payment request as well as supporting data either electronically or by hard copy. Unless waived by the Contracting Officer, a signed paper copy of the approved payment certification and request is also required and will govern in the event of discrepancy with the electronic version.

1.6.3 Quality Control (QC)

Enter and track implementation of the 3-phase QC Control System, QC testing, transferred and installed property and warranties in RMS. Prepare daily reports, identify and track deficiencies, document progress of work, and support other Contractor QC requirements in RMS. Maintain all data on a daily basis. Insure that RMS reflects all quality control methods, tests

and actions contained within the Contractor Quality Control (CQC) Plan and Government review comments of same within 7 calendar days of Government acceptance of the CQC Plan.

1.6.3.1 Quality Control (QC) Reports

The Contractor's Quality Control (QC) Daily Report in RMS is the official report. The Contractor can use other supplemental formats to record QC data, but information from any supplemental formats are to be consolidated and entered into the RMS QC Daily Report. Any supplemental information may be entered into RMS as an attachment to the report. QC Daily Reports must be finalized and signed in RMS within 24 hours after the date covered by the report. Provide the Government a printed signed copy of the QC Daily Report, unless waived by the Contracting Officer.

1.6.3.2 Deficiency Tracking.

Use the QC Daily Report Module to enter and track deficiencies. Deficiencies identified and entered into RMS by the Contractor or the Government will be sequentially numbered with a QC or QA prefix for tracking purposes. Enter each deficiency into RMS the same day that the deficiency is identified. Monitor, track and resolve all QC and QA entered deficiencies. A deficiency is not considered to be corrected until the Government indicates concurrence in RMS.

1.6.3.3 Three-Phase Control Meetings

Maintain scheduled and actual dates and times of preparatory and initial control meetings in RMS. Worksheets for the three-phase control meetings are generated within RMS.

1.6.3.4 Labor and Equipment Hours

Enter labor and equipment exposure hours on a daily basis. Roll up the labor and equipment exposure data into a monthly exposure report.

1.6.3.5 Accident/Safety Reporting

Both the Contractor and the Government enter safety related comments in RMS as a deficiency. The Contractor must monitor, track and show resolution for safety issues in the QC Daily Report area of the RMS QC Module. In addition, follow all reporting requirements for accidents and incidents as required in EM 385-1-1, Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS and as required by any other applicable Federal, State or local agencies.

1.6.3.6 Definable Features of Work

Enter each feature of work, as defined in the approved CQC Plan, into the RMS QC Module. A feature of work may be associated with a single or multiple pay activities, however a pay activity is only to be linked to a single feature of work.

1.6.3.7 Activity Hazard Analysis

Import activity hazard analysis electronic document files into the RMS QC Module utilizing the document package manager.

1.6.4 Submittal Management

Enter all current submittal register data and information into RMS within 7 calendar days of receiving access to the contract in RMS. The information shown on the submittal register following the specification Section 01 33 00 SUBMITTAL PROCEDURES will already be entered into the RMS database when access is granted. Group electronic submittal documents into transmittal packages to send to the Government, except very large electronic files, samples, spare parts, mock ups, color boards, or where hard copies are specifically required. Track transmittals and update the submittal register in RMS on a daily basis throughout the duration of the contract. Submit hard copies of all submittals unless waived by the Contracting Officer.

1.6.5 Schedule

Enter and update the contract project schedule in RMS by either manually entering all schedule data or by importing the Standard Data Exchange Format (SDEF) file, based on the requirements in Section 01 32 01.00 13 PROJECT SCHEDULE.

1.6.6 Closeout

Closeout documents, processes and forms are managed and tracked in RMS by both the Contractor and the Government. Ensure that all closeout documents are entered, completed and documented within RMS.

1.7 IMPLEMENTATION

Use of RMS as described in the preceding paragraphs is mandatory. Ensure that sufficient resources are available to maintain contract data within the RMS system. RMS is an integral part of the Contractor's required management of quality control.

1.8 NOTIFICATION OF NONCOMPLIANCE

Take corrective action within 7 calendar days after receipt of notice of RMS non-compliance by the Contracting Officer.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

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TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS

05/18, CHG 08/21

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1. Project Sign

2. Safety Sign

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SECTION 01 50 00

TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS
05/18, CHG 08/21

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2019) Safety and Health Requirements
Manual

U.S. FEDERAL AVIATION ADMINISTRATION (FAA)

FAA AC 70/7460-1 (2015; Rev L) Obstruction Marking and
Lighting

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Construction Site Plan; G, RO

Bridge Utilization Plan; G, DO

1.3 CONSTRUCTION SITE PLAN

Prior to the start of work, submit a site plan showing the locations and dimensions of temporary facilities (including layouts and details, equipment and material storage area (onsite and offsite), and access and haul routes, avenues of ingress/egress to the fenced area and details of the fence installation. Identify any areas which may have to be graveled to prevent the tracking of mud. Indicate if the use of a supplemental or other staging area is desired. Show locations of safety and construction fences, site trailers, construction entrances, trash dumpsters, temporary sanitary facilities, and worker parking areas.

1.4 BRIDGE UTILIZATION PLAN

At a minimum of 28 days prior to construction activities, the Contractor shall submit a Bridge Utilization Plan detailing required scaffolding, scaffolding attachment points, sequence of all major deployment activities, and a bridge Inspection plan (BIP) per specification 01 35 13. Storage of material on the bridge is prohibited. Additionally, the plan shall include

all rigging equipment and loads, loading plans, scaffolding loads, and a comparison to existing bridge load ratings shall also be included in the report. The total load of scaffolding, rigging, and equipment, etc. shall not exceed the existing bridge load rating of 7 Tons. Any changes to the plan will require the plan to be updated by the Contractor and will require resubmission to the Government for review prior to implementation of the change. The load rating analysis/comparison shall be stamped by a licensed professional engineer (structural) in the State of Kansas.

1.5 DOD CONDITION OF READINESS (COR)

DOD will set the Condition of Readiness (COR) based on the weather forecast for sustained winds 50 knots (60mph or 95 km/hr) or greater. Contact the Contracting Officer for the current COR setting.

Monitor weather conditions a minimum of twice a day and take appropriate actions according to the approved Emergency Plan in the accepted Accident Prevention Plan, EM 385-1-1 Section 01 Emergency Planning and the instructions below.

Unless otherwise directed by the Contracting Officer, comply with:

- a. Condition FOUR (Sustained winds of 50 knots or greater expected within 72 hours): Normal daily jobsite cleanup and good housekeeping practices. Collect and store in piles or containers scrap lumber, waste material, and rubbish for removal and disposal at the close of each work day. Maintain the construction site including storage areas, free of accumulation of debris. Stack form lumber in neat piles less than 4 feet high. Remove all debris, trash, or objects that could become missile hazards.
- b. Condition THREE (Sustained winds of 50 knots or greater expected within 48 hours): Maintain "Condition FOUR" requirements and commence securing operations necessary for "Condition ONE" which cannot be completed within 18 hours. Cease all routine activities which might interfere with securing operations. Commence securing and stow all gear and portable equipment. Make preparations for securing buildings. Review requirements pertaining to "Condition TWO" and continue action as necessary to attain "Condition THREE" readiness.
- c. Condition TWO (Sustained winds of 50 knots or greater expected within 24 hours): Curtail or cease routine activities until securing operation is complete. Reinforce or remove form work and scaffolding. Secure machinery, tools, equipment, materials, or remove from the jobsite. Expend every effort to clear all missile hazards and loose equipment from general base areas.
- d. Condition ONE. (Sustained winds of 50 knots or greater expected within 12 hours): Secure the jobsite, and leave Government premises.

PART 2 PRODUCTS

2.1 TEMPORARY SIGNAGE

2.1.1 Bulletin Board

Within one calendar day of mobilization on site and prior to the commencement of work activities, provide a clear weatherproof covered bulletin board not less than 36 by 48 inches in size for displaying the

Equal Employment Opportunity poster, a copy of the wage decision contained in the contract, Wage Rate Information poster, Safety and Health Information as required by EM 385-1-1 Section 01 and other information approved by the Contracting Officer. Coordinate requirements herein with 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS.

2.1.2 Project Identification Signs

The requirements for the signs, their content, and location shall be as shown on the examples provided at the end of this section. The signs shall be erected within 15 days after receipt of the notice to proceed. The data required by the safety sign shall be corrected daily, with light colored metallic or non-metallic numerals. Upon completion of the project, the signs shall be removed from the site.

2.1.3 Warning Signs

Post temporary signs, tags, and labels to give workers and the public adequate warning and caution of construction hazards according to the EM 385-1-1 Section 04. Attach signs to the perimeter fencing every 150 feet warning the public of the presence of construction hazards. Signs must require unauthorized persons to keep out of the construction site. Correct the data required by safety signs daily.

2.2 TEMPORARY TRAFFIC CONTROL

During construction the Contractor shall provide access and temporary relocated roads as necessary to maintain traffic. The Contractor shall maintain and protect traffic on all affected roads during the construction period except as otherwise specifically directed by the Contracting Officer. Measures for the protection and diversion of traffic, including the provision of watchmen and flagmen, erection of barricades, placing of lights around and in front of equipment and the work, and the erection and maintenance of adequate warning, danger, and direction signs, shall be as required by the State and local authorities having jurisdiction. The traveling public shall be protected from damage to person and property. The Contractor's traffic on roads selected for hauling material to and from the site shall interfere as little as possible with public traffic. The Contractor shall investigate the adequacy of existing roads and the allowable load limit on these roads. The Contractor shall be responsible for the repair of any damage to roads caused by construction operations.

2.2.1 Haul Roads

Construct access and haul roads necessary for proper prosecution of the work under this contract in accordance with EM 385-1-1 Section 04. Construct with suitable grades and widths; sharp curves, blind corners, and dangerous cross traffic are to be avoided. Provide necessary lighting, signs, barricades, and distinctive markings for the safe movement of traffic. The method of dust control, although optional, must be adequate to ensure safe operation at all times. Location, grade, width, and alignment of construction and hauling roads are subject to approval by the Contracting Officer. Lighting must be adequate to assure full and clear visibility for full width of haul road and work areas during any night work operations.

2.2.2 Barricades

Erect and maintain temporary barricades to limit public access to hazardous

areas. Whenever safe public access to paved areas such as roads, parking areas or sidewalks is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic barricades will be required. Securely place barricades clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.

2.3 FENCING

Provide fencing along the construction site at all open excavations and tunnels to control access by unauthorized people. Fencing must be installed to be able to restrain a force of at least 250 pounds against it.

PART 3 EXECUTION

3.1 EMPLOYEE PARKING

Construction contract employees will park privately owned vehicles in an area designated by the Contracting Officer. This area will be within reasonable walking distance of the construction site. Employee parking must not interfere with existing and established parking requirements of the government installation.

3.2 TEMPORARY BULLETIN BOARD

Locate the bulletin board at the project site in a conspicuous place easily accessible to all employees, as approved by the Contracting Officer.

3.3 AVAILABILITY AND USE OF UTILITY SERVICES

3.3.1 Temporary Utilities

Provide temporary utilities required for construction. Materials may be new or used, must be adequate for the required usage, not create unsafe conditions, and not violate applicable codes and standards.

3.3.2 Utility Services

- a. There will be no additional power, compressed air, water or other utilities made available to the Contractor for performance of this work beyond what is currently available. The Contractor is responsible for all coordination and temporary metering with the local utility provider. All utilities, which shall be provided by the Contractor, shall be installed, operated and maintained in accordance with the applicable codes governing such utilities. The Contractor will be required to furnish all temporary power, lines, transformers, connections and maintain them in a workmanlike manner in accordance with the National Electrical Code and EM 385-1-1. Prior to the completion of the contract, all temporary facilities and utilities shall be removed and the regular facilities shall be restored to their original condition. Unless otherwise provided in the contract, the amount of each utility service consumed will be charged to or paid for by the Contractor at prevailing rates charged to the Government or, where the utility is produced by the Government, at reasonable rates determined by the Contracting Officer. Carefully conserve any utilities furnished without charge.

3.3.3 Sanitation

a. Provide and maintain within the construction area minimum field-type sanitary facilities approved by the Contracting Officer and periodically empty wastes into a municipal, district, or station sanitary sewage system, or remove waste to a commercial facility. Obtain approval from the system owner prior to discharge into any municipal, district, or commercial sanitary sewer system. Any penalties or fines associated with improper discharge will be the responsibility of the Contractor. Coordinate with the Contracting Officer and follow station regulations and procedures when discharging into the station sanitary sewer system. Maintain these conveniences at all times. Include provisions for pest control and elimination of odors. Government toilet facilities will not be available to Contractor's personnel.

3.3.4 Telephone

Make arrangements and pay all costs for telephone facilities desired.

3.3.5 Obstruction Lighting of Cranes

Provide a minimum of 2 aviation red or high intensity white obstruction lights on temporary structures (including cranes) over 100 feet above ground level. Light construction and installation must comply with FAA AC 70/7460-1. Lights must be operational during periods of reduced visibility, darkness, and as directed by the Contracting Officer.

3.3.6 Fire Protection

Provide temporary fire protection equipment for the protection of personnel and property during construction. Remove debris and flammable materials daily to minimize potential hazards.

3.4 CONTRACTOR'S TEMPORARY FACILITIES

3.4.1 Safety Systems

Protect the integrity of any installed safety systems or personnel safety devices. Obtain prior approval from Contracting Officer if entrance into systems serving safety devices is required. If it is temporarily necessary to remove or disable personnel safety devices in order to accomplish contract requirements, provide alternative means of protection prior to removing or disabling any permanently installed safety devices or equipment and obtain approval from the Contracting Officer.

3.4.2 Administrative Field Offices

Provide and maintain administrative field office facilities within the construction area at the designated site. Government office and warehouse facilities will not be available to the Contractor's personnel.

3.4.3 Storage Area

Construct a temporary 6 foot high chain link fence around trailers and materials. Include plastic strip inserts, colored brown, so that visibility through the fence is obstructed. Fence posts may be driven, in lieu of concrete bases, where soil conditions permit. Do not place or store trailers, materials, or equipment outside the fenced area unless such

trailers, materials, or equipment are assigned a separate and distinct storage area by the Contracting Officer away from the vicinity of the construction site but within the installation boundaries. Trailers, equipment, or materials must not be open to public view with the exception of those items which are in support of ongoing work on any given day. Do not stockpile materials outside the fence in preparation for the next day's work. Park mobile equipment, such as tractors, wheeled lifting equipment, cranes, trucks, and like equipment within the fenced area at the end of each work day.

3.4.4 Appearance of Trailers

- a. Trailers which are rusted, have peeling paint or are otherwise in need of repair will not be allowed on Installation property. Trailers must present a clean and neat exterior appearance and be in a state of good repair.
- b. Paint and maintain the temporary facilities. Failure to do so will be sufficient reason to require their removal.

3.4.5 Maintenance of Storage Area

- a. Keep fencing in a state of good repair and proper alignment. Grassed or unpaved areas, which are not established roadways, and will be traversed with construction equipment or other vehicles, will be covered with a layer of gravel as necessary to prevent rutting and the tracking of mud onto paved or established roadways, should the Contractor elect to traverse them with construction equipment or other vehicles. Mow and maintain grass located within the boundaries of the construction site for the duration of the project. Grass and vegetation along fences, buildings, under trailers, and in areas not accessible to mowers will be edged or trimmed neatly.

3.4.6 New Building

In the event a new building is constructed for the temporary project field office, it will be a minimum 12 feet in width, 16 feet in length and have a minimum of 7 feet headroom. Equip the building with approved electrical wiring, at least one double convenience outlet and the required switches and fuses to provide 110-120 volt power. Provide a work table with stool, desk with chair, two additional chairs, and one legal size file cabinet that can be locked. The building must be waterproof, supplied with a heater, have a minimum of two doors, electric lights, a telephone, a battery operated smoke detector alarm, a sufficient number of adjustable windows for adequate light and ventilation, and a supply of approved drinking water. Approved sanitary facilities must be furnished. Screen the windows and doors and provide the doors with dead bolt type locking devices or a padlock and heavy duty hasp bolted to the door. Door hinge pins will be non-removable. Arrange the windows to open and to be securely fastened from the inside. Protect glass panels in windows by bars or heavy mesh screens to prevent easy access. In warm weather, furnish air conditioning capable of maintaining the office at 50 percent relative humidity and a room temperature 20 degrees F below the outside temperature when the outside temperature is 95 degrees F. Any new building erected for a temporary field office must be maintained during the life of the contract. Unless otherwise directed by the Contracting Officer, remove the building from the site upon completion and acceptance of the work.

3.4.7 Security Provisions

Provide adequate outside security lighting at the temporary facilities. The Contractor will be responsible for the security of its own equipment.

3.4.8 Weather Protection of Temporary Facilities and Stored Materials

Take necessary precautions to ensure that roof openings and other critical openings in the building are monitored carefully. Take immediate actions required to seal off such openings when rain or other detrimental weather is imminent, and at the end of each workday. Ensure that the openings are completely sealed off to protect materials and equipment in the building from damage.

3.4.8.1 Building and Site Storm Protection

When a warning of gale force winds is issued, take precautions to minimize danger to persons, and protect the work and nearby Government property. Precautions must include, but are not limited to, closing openings; removing loose materials, tools and equipment from exposed locations; and removing or securing scaffolding and other temporary work. Close openings in the work when storms of lesser intensity pose a threat to the work or any nearby Government property.

3.5 PLANT COMMUNICATIONS

Whenever the individual elements of the plant are located so that operation by normal voice between these elements is not satisfactory, install a satisfactory means of communication, such as telephone or other suitable devices and make available for use by Government personnel.

3.6 TEMPORARY PROJECT SAFETY FENCING

As soon as practicable, but not later than 15 days after the date established for commencement of work, furnish and erect temporary project safety fencing at the work site. Maintain the safety fencing during the life of the contract and, upon completion and acceptance of the work, remove from the work site.

3.7 CLEANUP

Remove construction debris, waste materials, packaging material and the like from the work site daily. Any dirt or mud which is tracked onto paved or surfaced roadways must be cleaned away. Neatly stack stored materials not in trailers, whether new or salvaged.

3.8 RESTORATION OF STORAGE AREA

Upon completion of the project remove the bulletin board, signs, barricades, haul roads, and any other temporary products from the site. After removal of trailers, materials, and equipment from within the fenced area, remove the fence. Restore areas used during the performance of the contract to the original or better condition. Remove gravel used to traverse grassed areas and restore the area to its original condition, including top soil and seeding as necessary.

Attachments

1. Project Sign

2. Safety Sign

-- End of Section --

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TEMPORARY ENVIRONMENTAL CONTROLS
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PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

WETLANDS DELINEATION MANUAL (1987) Corps of Engineers Wetlands
Delineation Manual

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910.120	Hazardous Waste Operations and Emergency Response
29 CFR 1910.1053	Respirable Crystalline Silica
29 CFR 1926.1153	Respirable Crystalline Silica
40 CFR 50	National Primary and Secondary Ambient Air Quality Standards
40 CFR 60	Standards of Performance for New Stationary Sources
40 CFR 63	National Emission Standards for Hazardous Air Pollutants for Source Categories
40 CFR 64	Compliance Assurance Monitoring
40 CFR 112	Oil Pollution Prevention
40 CFR 241	Guidelines for Disposal of Solid Waste
40 CFR 243	Guidelines for the Storage and Collection of Residential, Commercial, and Institutional Solid Waste
40 CFR 258	Subtitle D Landfill Requirements
40 CFR 260	Hazardous Waste Management System: General
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 261.7	Residues of Hazardous Waste in Empty Containers
40 CFR 262	Standards Applicable to Generators of

Hazardous Waste

40 CFR 262.31	Standards Applicable to Generators of Hazardous Waste-Labeling
40 CFR 263	Standards Applicable to Transporters of Hazardous Waste
40 CFR 264	Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
40 CFR 265	Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
40 CFR 266	Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities
40 CFR 268	Land Disposal Restrictions
40 CFR 273	Standards for Universal Waste Management
40 CFR 279	Standards for the Management of Used Oil
40 CFR 300	National Oil and Hazardous Substances Pollution Contingency Plan
40 CFR 300.125	National Oil and Hazardous Substances Pollution Contingency Plan - Notification and Communications
40 CFR 355	Emergency Planning and Notification
40 CFR 403	General Pretreatment Regulations for Existing and New Sources of Pollution
40 CFR 745	Lead-Based Paint Poisoning Prevention in Certain Residential Structures
49 CFR 171	General Information, Regulations, and Definitions
49 CFR 172	Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements
49 CFR 172.101	Hazardous Material Regulation-Purpose and Use of Hazardous Material Table
49 CFR 173	Shippers - General Requirements for Shipments and Packagings
49 CFR 178	Specifications for Packagings

1.2 DEFINITIONS

1.2.1 Class I and II Ozone Depleting Substance (ODS)

Class I ODS is defined in Section 602(a) of The Clean Air Act. A list of Class I ODS can be found on the EPA website at the following weblink.
<https://www.epa.gov/ozone-layer-protection/ozone-depleting-substances>.

Class II ODS is defined in Section 602(s) of The Clean Air Act. A list of Class II ODS can be found on the EPA website at the following weblink.
<https://www.epa.gov/ozone-layer-protection/ozone-depleting-substances>.

1.2.2 Contractor Generated Hazardous Waste

Contractor generated hazardous waste is materials that, if abandoned or disposed of, may meet the definition of a hazardous waste. These waste streams would typically consist of material brought on site by the Contractor to execute work, but are not fully consumed during the course of construction. Examples include, but are not limited to, excess paint thinners (i.e. methyl ethyl ketone, toluene), waste thinners, excess paints, excess solvents, waste solvents, excess pesticides, and contaminated pesticide equipment rinse water.

1.2.3 Environmental Pollution and Damage

Environmental pollution and damage is the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the environment aesthetically, culturally or historically.

1.2.4 Environmental Protection

Environmental protection is the prevention/control of pollution and habitat disruption that may occur to the environment during construction. The control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

1.2.5 Hazardous Debris

As defined in paragraph SOLID WASTE, debris that contains listed hazardous waste (either on the debris surface, or in its interstices, such as pore structure) in accordance with 40 CFR 261. Hazardous debris also includes debris that exhibits a characteristic of hazardous waste in accordance with 40 CFR 261.

1.2.6 Hazardous Materials

Hazardous materials as defined in 49 CFR 171 and listed in 49 CFR 172.

Hazardous material is any material that: Is regulated as a hazardous material in accordance with 49 CFR 173; or requires a Safety Data Sheet (SDS) in accordance with 29 CFR 1910.120; or during end use, treatment, handling, packaging, storage, transportation, or disposal meets or has components that meet or have potential to meet the definition of a hazardous waste as defined by 40 CFR 261 Subparts A, B, C, or D.

Designation of a material by this definition, when separately regulated or controlled by other sections or directives, does not eliminate the need for adherence to that hazard-specific guidance which takes precedence over this section for "control" purposes. Such material includes ammunition, weapons, explosive actuated devices, propellants, pyrotechnics, chemical and biological warfare materials, medical and pharmaceutical supplies, medical waste and infectious materials, bulk fuels, radioactive materials, and other materials such as asbestos, mercury, and polychlorinated biphenyls (PCBs).

1.2.7 Hazardous Waste

Hazardous Waste is any material that meets the definition of a solid waste and exhibit a hazardous characteristic (ignitability, corrosivity, reactivity, or toxicity) as specified in 40 CFR 261, Subpart C, or contains a listed hazardous waste as identified in 40 CFR 261, Subpart D.

1.2.8 Land Application

Land Application means spreading or spraying discharge water at a rate that allows the water to percolate into the soil. No sheeting action, soil erosion, discharge into storm sewers, discharge into defined drainage areas, or discharge into the "waters of the United States" must occur. Comply with federal, state, and local laws and regulations.

1.2.9 National Pollutant Discharge Elimination System (NPDES)

The NPDES permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States.

1.2.10 Oily Waste

Oily waste are those materials that are, or were, mixed with Petroleum, Oils, and Lubricants (POLs) and have become separated from that POLs. Oily wastes also means materials, including wastewaters, centrifuge solids, filter residues or sludges, bottom sediments, tank bottoms, and sorbents which have come into contact with and have been contaminated by, POLs and may be appropriately tested and discarded in a manner which is in compliance with other state and local requirements.

This definition includes materials such as oily rags, "kitty litter" sorbent clay and organic sorbent material. These materials may be land filled provided that: It is not prohibited in other state regulations or local ordinances; the amount generated is "de minimus" (a small amount); it is the result of minor leaks or spills resulting from normal process operations; and free-flowing oil has been removed to the practicable extent possible. Large quantities of this material, generated as a result of a major spill or in lieu of proper maintenance of the processing equipment, are a solid waste. As a solid waste, perform a hazardous waste determination prior to disposal. As this can be an expensive process, it is recommended that this type of waste be minimized through good housekeeping practices and employee education.

1.2.11 Regulated Waste

Regulated waste are solid wastes that have specific additional federal, state, or local controls for handling, storage, or disposal.

1.2.12 Sediment

Sediment is soil and other debris that have eroded and have been transported by runoff water or wind.

1.2.13 Solid Waste

Solid waste is a solid, liquid, semi-solid or contained gaseous waste. A solid waste can be a hazardous waste, non-hazardous waste, or non-Resource Conservation and Recovery Act (RCRA) regulated waste. Types of solid waste typically generated at construction sites may include:

1.2.13.1 Debris

Debris is non-hazardous solid material generated during the construction, demolition, or renovation of a structure that exceeds 2.5-inch particle size that is: a manufactured object; plant or animal matter; or natural geologic material (for example, cobbles and boulders), broken or removed concrete, masonry, and rock asphalt paving; ceramics; roofing paper and shingles. A mixture of debris and other material such as soil or sludge is also subject to regulation as debris if the mixture is comprised primarily of debris by volume, based on visual inspection.

1.2.13.2 Green Waste

Green waste is the vegetative matter from landscaping, land clearing and grubbing, including, but not limited to, grass, bushes, scrubs, small trees and saplings, tree stumps and plant roots. Marketable trees, grasses and plants that are indicated to remain, be re-located, or be re-used are not included.

1.2.13.3 Material not regulated as solid waste

Material not regulated as solid waste is nuclear source or byproduct materials regulated under the Federal Atomic Energy Act of 1954 as amended; suspended or dissolved materials in domestic sewage effluent or irrigation return flows, or other regulated point source discharges; regulated air emissions; and fluids or wastes associated with natural gas or crude oil exploration or production.

1.2.13.4 Non-Hazardous Waste

Non-hazardous waste is waste that is excluded from, or does not meet, hazardous waste criteria in accordance with 40 CFR 263.

1.2.13.5 Recyclables

Recyclables are materials, equipment and assemblies such as doors, windows, door and window frames, plumbing fixtures, glazing and mirrors that are recovered and sold as recyclable, and structural components. It also includes commercial-grade refrigeration equipment with Freon removed, household appliances where the basic material content is metal, clean polyethylene terephthalate bottles, cooking oil, used fuel oil, textiles, high-grade paper products and corrugated cardboard, stackable pallets in good condition, clean crating material, and clean rubber/vehicle tires. Metal meeting the definition of lead contaminated or lead based paint contaminated may not be included as recyclable if sold to a scrap metal company. Paint cans that meet the definition of empty containers in accordance with 40 CFR 261.7 may be included as recyclable if sold to a

scrap metal company.

1.2.13.6 Surplus Soil

Surplus soil is existing soil that is in excess of what is required for this work, including aggregates intended, but not used, for on-site mixing of concrete, mortars, and paving. Contaminated soil meeting the definition of hazardous material or hazardous waste is not included and must be managed in accordance with paragraph HAZARDOUS MATERIAL MANAGEMENT.

1.2.14 Surface Discharge

Surface discharge means discharge of water into drainage ditches, storm sewers, creeks or "waters of the United States". Surface discharges are discrete, identifiable sources and require a permit from the governing agency. Comply with federal, state, and local laws and regulations.

1.2.15 Wastewater

Wastewater is the used water and solids from a community that flow to a treatment plant.

1.2.15.1 Stormwater

Stormwater is any precipitation in an urban or suburban area that does not evaporate or soak into the ground, but instead collects and flows into storm drains, rivers, and streams.

1.2.16 Waters of the United States

Waters of the United States means Federally jurisdictional waters, including wetlands, that are subject to regulation under Section 404 of the Clean Water Act or navigable waters, as defined under the Rivers and Harbors Act.

1.2.17 Wetlands

Wetlands are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Official determination of whether or not an area is classified as a wetland must be done in accordance with WETLANDS DELINEATION MANUAL at http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/reg_supp/gp_supp.pdf and

http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/reg_supp/erdc-el-tr-10-16.p

http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/reg_supp.aspx

1.2.18 Universal Waste

The universal waste regulations streamline collection requirements for certain hazardous wastes in the following categories: batteries, pesticides, mercury-containing equipment (for example, thermostats), and lamps (for example, fluorescent bulbs). The rule is designed to reduce hazardous waste in the municipal solid waste (MSW) stream by making it easier for universal waste handlers to collect these items and send them for recycling or proper disposal. These regulations can be found at 40 CFR 273.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Regulatory Notifications; G, RO

Environmental Protection Plan; G, DO

Employee Training Records; G, DO

Environmental Manager Qualifications; G, DO

SD-07 Certificates

Employee Training Records; G, RO

SD-11 Closeout Submittals

Waste Determination Documentation; G, RO

Disposal Documentation for Hazardous and Regulated Waste; G, RO

Hazardous Waste/Debris Management; G, RO

Regulatory Notifications; G, RO

Sales Documentation; G, RO

1.4 ENVIRONMENTAL PROTECTION REQUIREMENTS

Provide and maintain, during the life of the contract, environmental protection as defined. Plan for and provide environmental protective measures to control pollution that develops during construction practice. Plan for and provide environmental protective measures required to correct conditions that develop during the construction of permanent or temporary environmental features associated with the project. Protect the environmental resources within the project boundaries and those affected outside the limits of permanent work during the entire duration of this Contract. Comply with federal, state, and local regulations pertaining to the environment, including water, air, solid waste, hazardous waste and substances, oily substances, and noise pollution.

Tests and procedures assessing whether construction operations comply with Applicable Environmental Laws may be required. Analytical work must be performed by qualified laboratories; and where required by law, the laboratories must be certified.

1.4.1 Conformance with the Environmental Management System

Perform work under this contract consistent with the policy and objectives identified in the installation's Environmental Management System (EMS).

Perform work in a manner that conforms to objectives and targets of the environmental programs and operational controls identified by the EMS. Support Government personnel when environmental compliance and EMS audits are conducted by escorting auditors at the Project site, answering questions, and providing proof of records being maintained. Provide monitoring and measurement information as necessary to address environmental performance relative to environmental, energy, and transportation management goals. In the event an EMS nonconformance or environmental noncompliance associated with the contracted services, tasks, or actions occurs, take corrective and preventative actions. In addition, employees must be aware of their roles and responsibilities under the installation EMS and of how these EMS roles and responsibilities affect work performed under the contract.

Coordinate with the installation's EMS coordinator to identify training needs associated with environmental aspects and the EMS, and arrange training or take other action to meet these needs. Provide training documentation to the Contracting Officer. The Installation Environmental Office will retain associated environmental compliance records. Make EMS Awareness training completion certificates available to Government auditors during EMS audits and include the certificates in the Employee Training Records. See paragraph EMPLOYEE TRAINING RECORDS.

1.5 SPECIAL ENVIRONMENTAL REQUIREMENTS

Comply with the special environmental requirements listed here and attached at the end of this section.

1.6 AQUATIC NUISANCE SPECIES PREVENTION MEASURES

The U.S. Army Corps of Engineers, Kansas City District (KCD) has implemented special regulations to prevent contamination by aquatic nuisance species (ANS), particularly zebra mussels and to prevent their spread to other areas. Zebra mussels and other ANS can be transported by boats, trailers, outboard motors and other equipment such as tractors, bulldozers, water pumps, ropes and nets that are used in areas that ANS inhabit. In KCD, zebra mussels have been found in several lakes and river systems and it should be assumed that equipment on this project will be exposed to zebra mussels. If equipment is not properly inspected and treated to prevent the spread of zebra mussels and other ANS, they can be introduced into areas not currently infested. To assist in preventing the introduction and spread of ANS as a result of work contracted by the U.S. Army Corps of Engineers, the following precautions shall be taken:

Prior to transporting, visually inspect all equipment for zebra mussels and other ANS. All trash, mud, vegetation, and suspected zebra mussels should be removed, placed in plastic bags and properly disposed in land-based receptacles. All equipment must be thoroughly cleaned, dried and or decontaminated prior to arriving at any Corps of Engineers job site.

All equipment and supplies intended for use in KCD waters that has been exposed to other lake or stream water shall be thoroughly washed with a hot water power washer and shall be allowed to completely dry or shall be exposed to freezing temperatures for an appropriate length of time as determined by the Contracting Officer. The appropriate length of drying time is dependent upon when the work is scheduled to begin. Use the following link to determine the number of drying days needed;
<http://www.100thmeridian.org/emersion.asp>.

Water being used for power washing must be 140 degrees Fahrenheit at point of contact for equipment being decontaminated. All exposed surfaces must be sprayed for a minimum of 10 seconds. All contaminated runoff must not be allowed to drain to uncontaminated areas and shall be adequately rerouted or contained, treated and disposed of properly.

Equipment and supplies including pumps that cannot be thoroughly drained, cleaned, and dried shall be treated on all interior and exterior surfaces with 140 degree water for 10 seconds or submerged in vinegar (100%) for 20 minutes or submerged in 200 ppm chlorine for 10 minutes. If chlorine is used, it should be neutralized with 800 ppm sodium thiosulfate and rinsed according to the table below. All vinegar and chlorine runoff and waste must be contained, treated, and disposed of properly.

A Corps of Engineers representative will conduct an onsite inspection of all vessels, equipment, pumps and supplies to be used in or around the water before work begins. The date and time of decontamination and the onsite inspection shall be documented and must be coordinated with the Contracting Office in advance.

Vessels and equipment shall be inspected upon removal from the body of water. Hulls, anchors, moorings, trailers, etc. must be decontaminated in accordance with this section and shall be clean of all mud, vegetation and any zebra mussels before leaving the facility. Any suspected zebra mussels must be removed, contained for verification and reported to the Contracting Officer.

All vessels and equipment being removed from KCD waters or others currently infested or suspected of being infested with zebra mussels or other ANS must also be decontaminated as described above.

Disinfectant Amounts to Make Needed Concentrations

Disinfectant	1 gallon	2 gallons	5 gallons	20 gallons	100 gallons
200 ppm Chlorine (household bleach, 5.25% Chlorine)	0.5 ounce (15 ml)	1.0 ounce (30 ml)	2.5 ounces (75 ml)	11.0 ounces (300 ml)	6 1/3 cups (1.5L)
800 ppm Sodium Thiosulfate	0.1 ounce (3 g)	0.2 ounce (6 g)	0.5 ounce (15 g)	2.1 ounces (60 g)	10.6 ounces (300 g)

Notes:

- a. Zebra mussel juveniles, called veligers are microscopic and invisible to the naked eye.
- b. Air drying and hot water are most effective when used in conjunction with each other. Their effectiveness is highly dependent upon ambient temperatures and contact times.
- c. Household bleach (5.25% chlorine) and vinegar can be purchased from grocery or convenience stores. Sodium Thiosulfate can be purchased at

pool supply stores or chemical companies.

d. All bilges and hidden areas under boat decks must be thoroughly treated as described above.

e. For instructions on cleaning and decontaminating specific types of equipment use the following link to access the Inspection and Cleaning Manual for Equipment and Vehicles to Prevent the Spread of Invasive Species;
http://www.usbr.gov/pps/EquipmentInspectionandCleaningManual_Sept09.pdf

1.7 QUALITY ASSURANCE

1.7.1 Preconstruction Survey and Protection of Features

1.7.2 Regulatory Notifications

Provide regulatory notification requirements in accordance with federal, state and local regulations. In cases where the Government will also provide public notification (such as stormwater permitting), coordinate with the Contracting Officer. Submit copies of regulatory notifications to the Contracting Officer at least 10 days prior to commencement of work activities. Typically, regulatory notifications must be provided for the following (this listing is not all-inclusive): demolition, renovation, NPDES defined site work, construction, removal or use of a permitted air emissions source, and remediation of controlled substances (asbestos, hazardous waste, lead paint).

1.7.3 Environmental Brief

Attend an environmental brief to be included in the preconstruction meeting. Provide the following information: types, quantities, and use of hazardous materials that will be brought onto the installation; and types and quantities of wastes/wastewater that may be generated during the Contract. Discuss the results of the Preconstruction Survey at this time.

1.7.4 Environmental Manager

Appoint in writing an Environmental Manager for the project site. The Environmental Manager is directly responsible for coordinating contractor compliance with federal, state, local, and installation requirements. The Environmental Manager must ensure compliance with Hazardous Waste Program requirements (including hazardous waste handling, storage, manifesting, and disposal); implement the EPP; ensure environmental permits are obtained, maintained, and closed out; ensure compliance with Stormwater Program requirements; ensure compliance with Hazardous Materials (storage, handling, and reporting) requirements; and coordinate any remediation of regulated substances (lead, asbestos, PCB transformers). This can be a collateral position; however, the person in this position must be trained to adequately accomplish the following duties: ensure waste segregation and storage compatibility requirements are met; inspect and manage Satellite Accumulation areas; ensure only authorized personnel add wastes to containers; ensure Contractor personnel are trained in 40 CFR requirements in accordance with their position requirements; coordinate removal of waste containers; and maintain the Environmental Records binder and required

documentation, including environmental permits compliance and close-out. Submit Environmental Manager Qualifications to the Contracting Officer.

1.7.5 Employee Training Records

Prepare and maintain Employee Training Records throughout the term of the contract meeting applicable 40 CFR requirements.

Train personnel to meet EPA and OSHA requirements. Conduct environmental protection/pollution control meetings for personnel prior to commencing construction activities. Contact additional meetings for new personnel and when site conditions change. Include in the training and meeting agenda: methods of detecting and avoiding pollution; familiarization with statutory and contractual pollution standards; installation and care of devices, vegetative covers, and instruments required for monitoring purposes to ensure adequate and continuous environmental protection/pollution control; anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants; recognition and protection of archaeological sites, artifacts, waters of the United States, and endangered species and their habitat that are known to be in the area.

1.7.6 Non-Compliance Notifications

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with federal, state or local environmental laws or regulations, permits, and other elements of the Contractor's EPP. After receipt of such notice, inform the Contracting Officer of the proposed corrective action and take such action when approved by the Contracting Officer. The Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. FAR 52.242-14 Suspension of Work provides that a suspension, delay, or interruption of work due to the fault or negligence of the Contractor allows for no adjustments to the contract for time extensions or equitable adjustments. In addition to a suspension of work, the Contracting Officer may use additional authorities under the contract or law.

1.8 ENVIRONMENTAL PROTECTION PLAN

The purpose of the EPP is to present an overview of known or potential environmental issues that must be considered and addressed during construction. Incorporate construction related objectives and targets from the installation's EMS into the EPP. Include in the EPP measures for protecting natural and cultural resources, required reports, and other measures to be taken. Meet with the Contracting Officer or Contracting Officer Representative to discuss the EPP and develop a mutual understanding relative to the details for environmental protection including measures for protecting natural resources, required reports, and other measures to be taken. Submit the EPP within 15 days after notice to proceed and not less than 10 days before the meeting. Revise the EPP throughout the project to include any reporting requirements, changes in site conditions, or contract modifications that change the project scope of work in a way that could have an environmental impact. No requirement in this section will relieve the Contractor of any applicable federal, state, and local environmental protection laws and regulations. During Construction, identify, implement, and submit for approval any additional requirements to be included in the EPP. Maintain the current version onsite.

Between approximately April 1 and August 1, is the primary nesting season

for most Kansas bird species. If work is to occur during this time period, prior to swallow nesting (approximately April 1), measures shall be taken to prevent nesting. Netting with a mesh size of ½ to ¾ inch has proven in the past to exclude nesting and roosting birds and bats from accessing the underside of the bridge surface. Similar methods were used at other local projects with good success. April 1 is only an estimated date for the primary nesting season for most Kansas bird species. Nesting prevention measures is required to be in place prior to any nests becoming active. Continuous removal of attempted nesting materials, before any eggs are laid, may be necessary during this project. Additional steps necessary for ensuring bridge work does not adversely affect the northern long-eared bat can be found in Appendix D: Bridge Assessment Guidance and Form located here: <https://www.fws.gov/Midwest/Endangered/section7/fhwa/index.html>. If evidence of bat roosting is not found, the documentation shall be retained. If evidence is found, the Contractor is required to coordinate with the Kansas U.S. Fish and Wildlife Service. The preconstruction meeting shall occur and submittal of an abbreviated Environmental Protection Plan, including the netting product information, and a basic safety plan shall be approved before the netting can be installed.

The EPP includes, but is not limited to, the following elements:

1.8.1 General Overview and Purpose

1.8.1.1 Descriptions

A brief description of each specific plan required by environmental permit or elsewhere in this Contract.

1.8.1.2 Duties

The duties and level of authority assigned to the person(s) on the job site who oversee environmental compliance, such as who is responsible for adherence to the EPP, who is responsible for spill cleanup and training personnel on spill response procedures, who is responsible for manifesting hazardous waste to be removed from the site (if applicable), and who is responsible for training the Contractor's environmental protection personnel.

1.8.1.3 Procedures

A copy of any standard or project-specific operating procedures that will be used to effectively manage and protect the environment on the project site.

1.8.1.4 Communications

Communication and training procedures that will be used to convey environmental management requirements to Contractor employees and subcontractors.

1.8.1.5 Contact Information

Emergency contact information contact information (office phone number, cell phone number, and e-mail address).

1.8.2 General Site Information

1.8.2.1 Drawings

Drawings showing locations of proposed temporary excavations or embankments for haul roads, stream crossings, jurisdictional wetlands, material storage areas, structures, sanitary facilities, storm drains and conveyances, and stockpiles of excess soil.

1.8.2.2 Work Area

Work area plan showing the proposed activity in each portion of the area and identify the areas of limited use or nonuse. Include measures for marking the limits of use areas, including methods for protection of features to be preserved within authorized work areas and methods to control runoff and to contain materials on site, and a traffic control plan.

1.8.2.3 Documentation

A letter signed by an officer of the firm appointing the Environmental Manager and stating that person is responsible for managing and implementing the Environmental Program as described in this contract. Include in this letter the Environmental Manager's authority to direct the removal and replacement of non-conforming work.

1.8.3 Management of Natural Resources

- a. Land resources
- b. Tree protection
- c. Replacement of damaged landscape features
- d. Temporary construction
- e. Stream crossings
- f. Fish and wildlife resources
- g. Wetland areas

1.8.4 Protection of Historical and Archaeological Resources

- a. Objectives
- b. Methods

1.8.5 Stormwater Management and Control

- a. Ground cover
- b. Erodible soils
- c. Temporary measures
 - (1) Structural Practices
 - (2) Temporary and permanent stabilization

- d. Effective selection, implementation and maintenance of Best Management Practices (BMPs).

1.8.6 Protection of the Environment from Waste Derived from Contractor Operations

Control and disposal of solid and sanitary waste. Control and disposal of hazardous waste.

This item consist of the management procedures for hazardous waste to be generated. The elements of those procedures will coincide with the Installation Hazardous Waste Management Plan. The Contracting Officer will provide a copy of the Installation Hazardous Waste Management Plan. As a minimum, include the following:

- a. List of the types of hazardous wastes expected to be generated
- b. Procedures to ensure a written waste determination is made for appropriate wastes that are to be generated
- c. Sampling/analysis plan, including laboratory method(s) that will be used for waste determinations and copies of relevant laboratory certifications
- d. Methods and proposed locations for hazardous waste accumulation/storage (that is, in tanks or containers)
- e. Management procedures for storage, labeling, transportation, and disposal of waste (treatment of waste is not allowed unless specifically noted)
- f. Management procedures and regulatory documentation ensuring disposal of hazardous waste complies with Land Disposal Restrictions (40 CFR 268)
- g. Management procedures for recyclable hazardous materials such as lead-acid batteries, used oil, and similar
- h. Used oil management procedures in accordance with 40 CFR 279; Hazardous waste minimization procedures
- i. Plans for the disposal of hazardous waste by permitted facilities; and Procedures to be employed to ensure required employee training records are maintained.

1.8.7 Prevention of Releases to the Environment

Procedures to prevent releases to the environment

Notifications in the event of a release to the environment

1.8.8 Regulatory Notification and Permits

List what notifications and permit applications must be made. Some permits require up to 180 days to obtain. Demonstrate that those permits have been obtained or applied for by including copies of applicable environmental permits. The EPP will not be approved until the permits have been obtained.

1.8.9 Clean Air Act Compliance

1.8.9.1 Pollution Generating Equipment

Identify air pollution generating equipment or processes that may require federal, state, or local permits under the Clean Air Act. Determine requirements based on any current installation permits and the impacts of the project. Provide a list of all fixed or mobile equipment, machinery or operations that could generate air emissions during the project to the Installation Environmental Office (Air Program Manager).

1.8.9.2 Stationary Internal Combustion Engines

Identify portable and stationary internal combustion engines that will be supplied, used or serviced. Comply with 40 CFR 60 Subpart IIII, 40 CFR 60 Subpart JJJJ, 40 CFR 63 Subpart ZZZZ, and local regulations as applicable. At minimum, include the make, model, serial number, manufacture date, size (engine brake horsepower), and EPA emission certification status of each engine. Maintain applicable records and log hours of operation and fuel use. Logs must include reasons for operation and delineate between emergency and non-emergency operation.

1.8.9.3 Air Pollution-engineering Processes

Identify planned air pollution-generating processes and management control measures (including, but not limited to, spray painting, abrasive blasting, demolition, material handling, fugitive dust, and fugitive emissions). Log hours of operations and track quantities of materials used.

1.8.9.4 Compliant Materials

Provide the Government a list of and SDSs for all hazardous materials proposed for use on site. Materials must be compliant with all Clean Air Act regulations for emissions including solvent and volatile organic compound contents, and applicable National Emission Standards for Hazardous Air Pollutants requirements. The Government may alter or limit use of specific materials as needed to meet installation permit requirements for emissions.

1.9 LICENSES AND PERMITS

Obtain licenses and permits required for the construction of the project and in accordance with FAR 52.236-7 Permits and Responsibilities. Notify the Government of all general use permitted equipment the Contractor plans to use on site. This paragraph supplements the Contractor's responsibility under FAR 52.236-7 Permits and Responsibilities.

1.10 ENVIRONMENTAL RECORDS BINDER

Maintain on-site a separate three-ring Environmental Records Binder and submit at the completion of the project. Make separate parts within the binder that correspond to each submittal listed under Section 01 78 00 CLOSEOUT SUBMITTALS.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 PROTECTION OF NATURAL RESOURCES

Minimize interference with, disturbance to, and damage to fish, wildlife, and plants, including their habitats. The protection of rare, threatened, and endangered animal and plant species identified, including their habitats, is the Contractor's responsibility. The following species are known and could be affected within the construction area: swallows, primarily cliff swallows (*Petrochelidon pyrrhonota*).

Preserve the natural resources within the project boundaries and outside the limits of permanent work. Restore to an equivalent or improved condition upon completion of work that is consistent with the requirements of the Installation Environmental Office or as otherwise specified. Confine construction activities to within the limits of the work indicated or specified.

3.1.1 Migratory Birds and Threatened And Endangered Species

The contractor shall be responsible for compliance with all guidelines and requirements under the Endangered Species Act and the Migratory Bird Treaty Act. Prior to any work that would disturb or impact migratory birds, their nests, and/or any other federally protected species, the contractor will need to contact Contracting Officer.

3.1.2 Flow Ways

Do not alter water flows or otherwise significantly disturb the native habitat adjacent to the project and critical to the survival of fish and wildlife, except as specified and permitted.

3.1.3 Vegetation

Except in areas to be cleared, do not remove, cut, deface, injure, or destroy trees or shrubs without the Contracting Officer's permission. Do not fasten or attach ropes, cables, or guys to existing nearby trees for anchorages unless authorized by the Contracting Officer. Where such use of attached ropes, cables, or guys is authorized, the Contractor is responsible for any resultant damage.

Protect existing trees that are to remain to ensure they are not injured, bruised, defaced, or otherwise damaged by construction operations. Remove displaced rocks from uncleared areas. Coordinate with the Contracting Officer and Installation Environmental Office to determine appropriate action for trees and other landscape features scarred or damaged by equipment operations.

3.1.4 Streams

Stream crossings must allow movement of materials or equipment without violating water pollution control standards of the federal, state, and local governments. Construction of stream crossing structures must be in compliance with any required permits including, but not limited to, Clean Water Act Section 404, and Section 401 Water Quality.

The Contracting Officer's approval and appropriate permits are required before any equipment will be permitted to ford live streams. In areas where frequent crossings are required, install temporary culverts or

bridges. Obtain Contracting Officer's approval prior to installation. Remove temporary culverts or bridges upon completion of work, and repair the area to its original condition unless otherwise required by the Contracting Officer.

3.2 STORMWATER

Do not discharge stormwater from construction sites to the sanitary sewer. If the water is noted or suspected of being contaminated, it may only be released to the storm drain system if the discharge is specifically permitted. Obtain authorization in advance from the Installation Environmental Office for any release of contaminated water.

3.2.1 Erosion and Sediment Control Measures

Provide erosion and sediment control measures in accordance with state and local laws and regulations. Preserve vegetation to the maximum extent practicable.

Erosion control inspection reports may be compiled as part of a stormwater pollution prevention plan inspection reports.

3.2.2 Work Area Limits

Mark the areas that need not be disturbed under this Contract prior to commencing construction activities. Mark or fence isolated areas within the general work area that are not to be disturbed. Protect monuments and markers before construction operations commence. Where construction operations are to be conducted during darkness, any markers must be visible in the dark. Personnel must be knowledgeable of the purpose for marking and protecting particular objects.

3.2.3 Contractor Facilities and Work Areas

Place field offices, staging areas, stockpile storage, and temporary buildings in areas designated on the drawings or as directed by the Contracting Officer. Move or relocate the Contractor facilities only when approved by the Government. Provide erosion and sediment controls for onsite borrow and spoil areas to prevent sediment from entering nearby waters. Control temporary excavation and embankments for plant or work areas to protect adjacent areas.

3.3 SURFACE AND GROUNDWATER

3.3.1 Waters of the United States

Do not enter, disturb, destroy, or allow discharge of contaminants into waters of the United States. The protection of waters of the United States is the Contractor's responsibility. Authorization to enter specific waters of the United States identified does not relieve the Contractor from any obligation to protect other waters of the United States within, adjacent to, or in the vicinity of the construction site and associated boundaries.

3.4 PROTECTION OF CULTURAL RESOURCES

3.4.1 Historical Resources

Existing historical resources within the work area are shown on the

drawings. Protect these resources and be responsible for their preservation during the life of the Contract.

3.5 AIR RESOURCES

Equipment operation, activities, or processes will be in accordance with 40 CFR 64 and state air emission and performance laws and standards.

3.5.1 Preconstruction Air Permits

Notify the Air Program Manager, through the Contracting Officer, at least 6 months prior to bringing equipment, assembled or unassembled, onto the Installation, so that air permits can be secured. Necessary permitting time must be considered in regard to construction activities. Clean Air Act (CAA) permits must be obtained prior to bringing equipment, assembled or unassembled, onto the Installation.

3.5.2 Dust Control

Keep dust down at all times, including during nonworking periods. Dry power brooming will not be permitted. Instead, use vacuuming, wet mopping, wet sweeping, or wet power brooming. Only wet cutting will be permitted for cutting concrete blocks, concrete, and bituminous concrete. Do not unnecessarily shake bags of cement, concrete mortar, or plaster. Since these products contain Crystalline Silica, comply with the applicable OSHA standard, 29 CFR 1910.1053 or 29 CFR 1926.1153 for controlling exposure to Crystalline Silica Dust.

3.5.2.1 Particulates

Dust particles, aerosols and gaseous by-products from construction activities, and processing and preparation of materials (such as from asphaltic batch plants) must be controlled at all times, including weekends, holidays, and hours when work is not in progress. Maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and other work areas within or outside the project boundaries free from particulates that would exceed 40 CFR 50, state, and local air pollution standards or that would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, baghouse, scrubbers, electrostatic precipitators, or other methods will be permitted to control particulates in the work area. Sprinkling, to be efficient, must be repeated to keep the disturbed area damp. Provide sufficient, competent equipment available to accomplish these tasks. Perform particulate control as the work proceeds and whenever a particulate nuisance or hazard occurs. Comply with state and local visibility regulations.

3.5.2.2 Abrasive Blasting

The use of silica sand is prohibited in sandblasting.

Provide tarpaulin drop cloths and windscreens to enclose abrasive blasting operations to confine and collect dust, abrasive agent, paint chips, and other debris.

3.6 WASTE MINIMIZATION

Minimize the use of hazardous materials and the generation of waste. Include procedures for pollution prevention/ hazardous waste minimization

in the Hazardous Waste Management Section of the EPP. Obtain a copy of the installation's Pollution Prevention/Hazardous Waste Minimization Plan for reference material when preparing this part of the EPP. If no written plan exists, obtain information by contacting the Contracting Officer. Describe the anticipated types of the hazardous materials to be used in the construction when requesting information.

3.6.1 Salvage, Reuse and Recycle

Identify anticipated materials and waste for salvage, reuse, and recycling. Describe actions to promote material reuse, resale or recycling. To the extent practicable, all scrap metal must be sent for reuse or recycling and will not be disposed of in a landfill.

Include the name, physical address, and telephone number of the hauler, if transported by a franchised solid waste hauler. Include the destination and, unless exempted, provide a copy of the state or local permit (cover) or license for recycling.

3.7 WASTE MANAGEMENT AND DISPOSAL

3.7.1 Waste Determination Documentation

Complete a Waste Determination form (provided at the pre-construction conference) for Contractor-derived wastes to be generated. All potentially hazardous solid waste streams that are not subject to a specific exclusion or exemption from the hazardous waste regulations (e.g. scrap metal, domestic sewage) or subject to special rules, (lead-acid batteries and precious metals) must be characterized in accordance with the requirements of 40 CFR 261 or corresponding applicable state or local regulations. Base waste determination on user knowledge of the processes and materials used, and analytical data when necessary. Consult with the Installation environmental staff for guidance on specific requirements. Attach support documentation to the Waste Determination form. As a minimum, provide a Waste Determination form for the following waste (this listing is not inclusive): oil- and latex -based painting and caulking products, solvents, adhesives, aerosols, petroleum products, and containers of the original materials.

3.7.2 Solid Waste Management

3.7.2.1 Project Solid Waste Disposal Documentation Report

Provide copies of the waste handling facilities' weight tickets, receipts, bills of sale, and other sales documentation. In lieu of sales documentation, a statement indicating the disposal location for the solid waste that is signed by an employee authorized to legally obligate or bind the firm may be submitted. The sales documentation must include the receiver's tax identification number and business, EPA or state registration number, along with the receiver's delivery and business addresses and telephone numbers. For each solid waste retained for the Contractor's own use, submit the information previously described in this paragraph on the solid waste disposal report. Prices paid or received do not have to be reported to the Contracting Officer unless required by other provisions or specifications of this Contract or public law.

3.7.2.2 Control and Management of Solid Wastes

Pick up solid wastes, and place in covered containers that are regularly

emptied. Do not prepare or cook food on the project site. Prevent contamination of the site or other areas when handling and disposing of wastes. At project completion, leave the areas clean. Employ segregation measures so that no hazardous or toxic waste will become co-mingled with non-hazardous solid waste. Solid waste disposal offsite must comply with most stringent local, state, and federal requirements, including 40 CFR 241, 40 CFR 243, and 40 CFR 258.

Manage hazardous material used in construction, including but not limited to, aerosol cans, waste paint, cleaning solvents, contaminated brushes, and used rags, in accordance with 49 CFR 173.

3.7.3 Control and Management of Hazardous Waste

Do not dispose of hazardous waste on Government property. Do not discharge any waste to a sanitary sewer, storm drain, or to surface waters or conduct waste treatment or disposal on Government property without written approval of the Contracting Officer.

3.7.3.1 Hazardous Waste/Debris Management

Identify construction activities that will generate hazardous waste or debris. Provide a documented waste determination for resultant waste streams. Identify, label, handle, store, and dispose of hazardous waste or debris in accordance with federal, state, and local regulations, including 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 264, 40 CFR 265, 40 CFR 266, and 40 CFR 268.

Manage hazardous waste in accordance with the approved Hazardous Waste Management Section of the EPP. Store hazardous wastes in approved containers in accordance with 49 CFR 173 and 49 CFR 178. Hazardous waste generated within the confines of Government facilities is identified as being generated by the Government. Prior to removal of any hazardous waste from Government property, hazardous waste manifests must be signed by personnel from the Installation Environmental Office. Do not bring hazardous waste onto Government property. Provide the Contracting Officer with a copy of waste determination documentation for any solid waste streams that have any potential to be hazardous waste or contain any chemical constituents listed in 40 CFR 372-SUBPART D.

3.7.3.2 Hazardous Waste Disposal

3.7.3.2.1 Responsibilities for Contractor's Disposal

Provide hazardous waste manifest to the Installations Environmental Office for review, approval, and signature prior to shipping waste off Government property.

3.7.3.2.1.1 Services

Provide service necessary for the final treatment or disposal of the hazardous material or waste in accordance with 40 CFR 260, local, and state, laws and regulations, and the terms and conditions of the Contract within 60 days after the materials have been generated. These services include necessary personnel, labor, transportation, packaging, detailed analysis (if required for disposal or transportation, include manifesting or complete waste profile sheets, equipment, and compile documentation).

3.7.3.2.1.2 Samples

Obtain a representative sample of the material generated for each job done to provide waste stream determination.

3.7.3.2.1.3 Analysis

Analyze each sample taken and provide analytical results to the Contracting Officer. See paragraph WASTE DETERMINATION DOCUMENTATION.

3.7.3.2.1.4 Labeling

Determine the Department of Transportation's (DOT's) proper shipping names for waste (each container requiring disposal) and demonstrate to the Contracting Officer how this determination is developed and supported by the sampling and analysis requirements contained herein. Label all containers of hazardous waste with the words "Hazardous Waste" or other words to describe the contents of the container in accordance with 40 CFR 262.31 and applicable state or local regulations.

3.7.3.2.2 Contractor Disposal Turn-In Requirements

Hazardous waste generated must be disposed of in accordance with the following conditions to meet installation requirements:

- a. Drums must be compatible with waste contents and drums must meet DOT requirements for 49 CFR 173 for transportation of materials.
- b. Band drums to wooden pallets.
- c. No more than three 55 gallon drums or two 85 gallon over packs are to be banded to a pallet.
- d. Band using 1-1/4 inch minimum band on upper third of drum.
- e. Provide label in accordance with 49 CFR 172.101.
- f. Leave 3 to 5 inches of empty space above volume of material.

3.7.3.3 Disposal Documentation for Hazardous and Regulated Waste

Contact the Contracting Officer for the facility RCRA identification number that is to be used on each manifest.

Submit a copy of the applicable EPA and or state permit(s), manifest(s), or license(s) for transportation, treatment, storage, and disposal of hazardous and regulated waste by permitted facilities. Hazardous or toxic waste manifests must be reviewed, signed, and approved by the Contracting Officer before the Contractor may ship waste. To obtain specific disposal instructions, coordinate with the Installation Environmental Office.

3.7.4 Releases/Spills of Oil and Hazardous Substances

3.7.4.1 Response and Notifications

Exercise due diligence to prevent, contain, and respond to spills of hazardous material, hazardous substances, hazardous waste, sewage, regulated gas, petroleum, lubrication oil, and other substances regulated in accordance with 40 CFR 300. Maintain spill cleanup equipment and

materials at the work site. In the event of a spill, take prompt, effective action to stop, contain, curtail, or otherwise limit the amount, duration, and severity of the spill/release. In the event of any releases of oil and hazardous substances, chemicals, or gases; immediately (within 15 minutes) notify the Installation Fire Department, the Installation Command Duty Officer, the Installation Environmental Office, the Contracting Officer.

Submit verbal and written notifications as required by the federal (40 CFR 300.125 and 40 CFR 355), state, local regulations and instructions. Provide copies of the written notification and documentation that a verbal notification was made within 20 days. Spill response must be in accordance with 40 CFR 300 and applicable state and local regulations. Contain and clean up these spills without cost to the Government.

3.7.4.2 Clean Up

Clean up hazardous and non-hazardous waste spills. Reimburse the Government for costs incurred including sample analysis materials, clothing, equipment, and labor if the Government will initiate its own spill cleanup procedures, for Contractor- responsible spills, when: Spill cleanup procedures have not begun within one hour of spill discovery/occurrence; or, in the Government's judgment, spill cleanup is inadequate and the spill remains a threat to human health or the environment.

3.7.5 Wastewater

3.7.5.1 Disposal of wastewater must be as specified below.

3.7.5.1.1 Treatment

Do not allow wastewater from construction activities, such as onsite material processing, concrete curing, foundation and concrete clean-up, water used in concrete trucks, and forms to enter water ways or to be discharged prior to being treated to remove pollutants. Dispose of the construction- related waste water off-Government property in accordance with 40 CFR 403, state, regional, and local laws and regulations.

3.8 HAZARDOUS MATERIAL MANAGEMENT

Include hazardous material control procedures in the Safety Plan, in accordance with Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS. Address procedures and proper handling of hazardous materials, including the appropriate transportation requirements. Do not bring hazardous material onto Government property that does not directly relate to requirements for the performance of this contract. Submit an SDS and estimated quantities to be used for each hazardous material to the Contracting Officer prior to bringing the material on the installation. Typical materials requiring SDS and quantity reporting include, but are not limited to, oil and latex based painting and caulking products, solvents, adhesives, aerosol, and petroleum products. Use hazardous materials in a manner that minimizes the amount of hazardous waste generated. Containers of hazardous materials must have National Fire Protection Association labels or their equivalent. Certify that hazardous materials removed from the site are hazardous materials and do not meet the definition of hazardous waste, in accordance with 40 CFR 261.

3.9 PREVIOUSLY USED EQUIPMENT

Clean previously used construction equipment prior to bringing it onto the project site. Equipment must be free from soil residuals, egg deposits from plant pests, noxious weeds, and plant seeds. Consult with the U.S. Department of Agriculture jurisdictional office for additional cleaning requirements.

3.10 CONTROL AND MANAGEMENT OF LEAD-BASED PAINT (LBP)

Lead-containing paint in the existing bridge steel paint. Lead from paint, paint chips, and dust can pose health hazards is not managed properly. Testing reports of the existing paint are not available, however the original contract paint specifications indicate the paint primer included lead. Any testing needed to confirm the presence of lead and/or the quantity of lead present in the paint is considered to be subsidiary to the cost of the contract and will not be paid for separately. Manage and dispose of lead-contaminated waste in accordance with 40 CFR 745. Manifest any lead-contaminated waste and provide the manifest to the Contracting Officer.

3.11 PETROLEUM, OIL, LUBRICANT (POL) STORAGE AND FUELING

POL products include flammable or combustible liquids, such as gasoline, diesel, lubricating oil, used engine oil, hydraulic oil, mineral oil, and cooking oil. Store POL products and fuel equipment and motor vehicles in a manner that affords the maximum protection against spills into the environment. Manage and store POL products in accordance with EPA 40 CFR 112, and other federal, state, regional, and local laws and regulations. Use secondary containments, dikes, curbs, and other barriers, to prevent POL products from spilling and entering the ground, storm or sewer drains, stormwater ditches or canals, or navigable waters of the United States. Describe in the EPP (see paragraph ENVIRONMENTAL PROTECTION PLAN) how POL tanks and containers must be stored, managed, and inspected and what protections must be provided. Storage of fuel on the project site must be in accordance with EPA, state, and local laws and regulations and paragraph OIL STORAGE INCLUDING FUEL TANKS.

3.12 INADVERTENT DISCOVERY OF PETROLEUM-CONTAMINATED SOIL OR HAZARDOUS WASTES

If petroleum-contaminated soil, or suspected hazardous waste is found during construction that was not identified in the Contract documents, immediately notify the Contracting Officer. Do not disturb this material until authorized by the Contracting Officer.

3.13 SOUND INTRUSION

Make the maximum use of low-noise emission products, as certified by the EPA.

Keep construction activities under surveillance and control to minimize environment damage by noise. Comply with the provisions of the State of Kansas rules.

3.14 POST CONSTRUCTION CLEANUP

Clean up areas used for construction in accordance with Contract Clause:

"Cleaning Up". Unless otherwise instructed in writing by the Contracting Officer, remove traces of temporary construction facilities such as haul roads, work area, structures, foundations of temporary structures, stockpiles of excess or waste materials, and other vestiges of construction prior to final acceptance of the work. Grade parking area and similar temporarily used areas to conform with surrounding contours.

-- End of Section --

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SECTION 01 74 19

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL
02/19

PART 1 GENERAL

1.1 DEFINITIONS

1.1.1 Co-mingle

The practice of placing unrelated materials together in a single container, usually for benefits of convenience and speed.

1.1.2 Construction Waste

Waste generated by construction activities, such as scrap materials, damaged or spoiled materials, temporary and expendable construction materials, and other waste generated by the workforce during construction activities.

1.1.3 Demolition Debris/Waste

Waste generated from demolition activities, including minor incidental demolition waste materials generated as a result of Intentional dismantling of all or portions of a building, to include clearing of building contents that have been destroyed or damaged.

1.1.4 Disposal

Depositing waste in a solid waste disposal facility, usually a managed landfill, regulated in the US under the Resource Conservation and Recovery Act (RCRA).

1.1.5 Diversion

The practice of diverting waste from disposal in a landfill, by means of eliminating or minimizing waste, or reuse of materials.

1.1.6 Final Construction Waste Diversion Report

A written assertion by a material recovery facility operator identifying constituent materials diverted from disposal, usually including summary tabulations of materials, weight in short-ton.

1.1.7 Recycling

The series of activities, including collection, separation, and processing, by which products or other materials are diverted from the solid waste stream for use in the form of raw materials in the manufacture of new products sold or distributed in commerce, or the reuse of such materials as substitutes for goods made of virgin materials, other than fuel.

1.1.8 Reuse

The use of a product or materials again for the same purpose, in its

original form or with little enhancement or change.

1.1.9 Salvage

Usable, salable items derived from buildings undergoing demolition or deconstruction, parts from vehicles, machinery, other equipment, or other components.

1.1.10 Source Separation

The practice of administering and implementing a management strategy to identify and segregate unrelated waste at the first opportunity.

1.2 CONSTRUCTION WASTE (INCLUDES DEMOLITION DEBRIS/WASTE)

Divert a minimum of 60 percent by weight of the project construction waste and demolition debris/waste from the landfill. Follow applicable industry standards in the management of waste. Apply sound environmental principles in the management of waste. (1) Practice efficient waste management when sizing, cutting, and installing products and materials and (2) use all reasonable means to divert construction waste and demolition debris/waste from landfills and incinerators and to facilitate the recycling or reuse of excess construction materials.

1.3 CONSTRUCTION WASTE MANAGEMENT

Implement a construction waste management program for the project. Take a pro-active, responsible role in the management of construction construction waste, recycling process, disposal of demolition debris/waste, and require all subcontractors, vendors, and suppliers to participate in the construction waste management program. Establish a process for clear tracking, and documentation of construction waste and demolition debris/waste.

1.3.1 Implementation of Construction Waste Management Program

Develop and document how the construction waste management program will be implemented in a construction waste management plan. Submit a Construction Waste Management Plan to the Contracting Officer for approval. Construction waste and demolition debris/waste materials include un-used construction materials not incorporated in the final work, as well as demolition debris/waste materials from demolition activities or deconstruction activities. In the management of waste, consider the availability of viable markets, the condition of materials, the ability to provide material in suitable condition and in a quantity acceptable to available markets, and time constraints imposed by internal project completion mandates.

1.3.2 Oversight

The Quality Control Manager, as specified in Section 01 45 00.00 10 QUALITY CONTROL, is responsible for overseeing and documenting results from executing the construction waste management plan for the project.

1.3.3 Special Programs

Implement any special programs involving rebates or similar incentives related to recycling of construction waste and demolition debris/waste materials. Retain revenue or savings from salvaged or recycling, unless

otherwise directed. Ensure firms and facilities used for recycling, reuse, and disposal are permitted for the intended use to the extent required by federal, state, and local regulations.

1.3.4 Special Instructions

Provide on-site instruction of appropriate separation, handling, recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the projects. Designation of single source separating or commingling will be clearly marked on the containers.

1.3.5 Waste Streams

Delineate waste streams and characterization, including estimated material types and quantities of waste, in the construction waste management plan. Manage all waste streams associated with the project. Typical waste streams are listed below. Include additional waste streams not listed:

- (1) Land Clearing Debris
- (2) Asphalt
- (3) Masonry and CMU
- (4) Concrete
- (5) Metals (e.g. banding, stud trim, ductwork, piping, rebar, roofing, other trim, steel, iron, galvanized, stainless steel, aluminum, copper, zinc, bronze, etc.)
- (6) Wood (nails and staples allowed)
- (7) Glass
- (8) Paper
- (9) Plastics (PET, HDPE, PVC, LDPE, PP, PS, Other)
- (10) Gypsum
- (11) Non-hazardous paint and paint cans
- (12) Carpet
- (13) Ceiling Tiles
- (14) Insulation
- (15) Beverage Containers
- (16) Lead Based Paint

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit all submittals in conformance to Section 01 33 29 SUSTAINABILITY REPORTING. Submit the

following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Construction Waste Management Plan; G, RO

SD-11 Closeout Submittals

Final Construction Waste Diversion Report; G, RO

1.5 MEETINGS

Conduct Construction Waste Management meetings. After award of the Contract and prior to commencement of work, schedule and conduct a meeting with the Contracting Officer to discuss the proposed construction waste management plan and to develop a mutual understanding relative to the management of the construction waste management program and how waste diversion requirements will be met.

The requirements of this meeting may be fulfilled during the coordination and mutual Understanding meeting outlined in Section 01 45 00.00 10 QUALITY CONTROL. At a minimum, discuss and document waste management goals at following meetings:

- (16) Preconstruction meeting.
- (17) Regular Quality Control meetings.

1.6 CONSTRUCTION WASTE MANAGEMENT PLAN

Submit Construction Waste Management Plan within 15 days after Notice to Proceed. Revise and resubmit Construction Waste Management Plan until it receives final approval from the Contracting Officer, in order for construction to begin. Manage demolition debris/waste or deconstruction materials in accordance with the approved construction waste management plan.

An approved construction waste management plan will not relieve the Contractor of responsibility for compliance with applicable environmental regulations or meeting project cumulative waste diversion requirement. Ensure all subcontractors receive a copy of the approved Construction Waste Management Plan. The plan demonstrates how to meet the project waste diversion requirement. Also, include the following in the plan:

- a. Identify the names of individuals responsible for waste management and waste management tracking, along with roles and responsibilities on the project..
- b. Actions that will be taken to reduce solid waste generation, including coordination with subcontractors to ensure awareness and participation.
- c. Description of the regular meetings to be held to address waste management.
- d. Description of the specific approaches to be used in recycling/reuse of the various materials generated, including the areas on site and equipment to be used for processing, sorting, and temporary storage of

materials.

- e. Name of landfill and/or incinerator to be used.
- f. Identification of local and regional re-use programs, including non-profit organizations such as schools, local housing agencies, and organization that accept used materials such as material exchange networks and resale stores. Include the name, location, phone number for each re-use facility identified, and provide a copy of the permit or license for each facility.
- g. List of specific materials, by type and quantity, that will be salvaged for resale, salvaged and reused on the current project, salvaged and stored for reuse on a future project, or recycled. Identify the recycling facilities by name, address, and phone number.
- h. Identification of materials that cannot be recycled or reused with an explanation or justification, to be approved by the Contracting Officer.
- i. Description of the means by which any materials identified in item (g) above will be protected from contamination.
- j. Description of the means of transportation of the recyclable materials (whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler and removed from the site).
- k. Copy of training plan for subcontractors and other services to prevent contamination by co-mingling materials identified for diversion and waste materials.

Distribute copies of the waste management plan to each subcontractor, Quality Control Manager, and the Contracting Officer.

1.7 RECORDS (DOCUMENTATION)

1.7.1 General

Maintain records to document the types and quantities of waste generated and diverted through re-use, recycling and/or sale to third parties; through disposal to a landfill or incinerator facility. Provide explanations for any materials not recycled, reused or sold. Collect and retain manifests, weight tickets, sales receipts, and invoices specifically identifying diverted project waste materials or disposed materials.

1.7.2 Accumulated

Maintain a running record of materials generated and diverted from landfill disposal, including accumulated diversion rates for the project. Make records available to the Contracting Officer during construction or incidental demolition activities. Provide a copy of the diversion records to the Contracting Officer upon completion of the construction, incidental demolitions or minor deconstruction activities.

1.8 FINAL CONSTRUCTION WASTE DIVERSION REPORT

A Final Construction Waste Diversion Report is required at the end of the

project. Provide Final Construction Waste Diversion Report 60 days prior to the Beneficial Occupancy Date (BOD). The final Construction Waste Diversion Report must be included in the Sustainability eNotebook in accordance with Section 01 33 29 SUSTAINABILITY REPORTING.

1.9 COLLECTION

Collect, store, protect, and handle reusable and recyclable materials at the site in a manner which prevents contamination, and provides protection from the elements to preserve their usefulness and monetary value. Provide receptacles and storage areas designated specifically for recyclable and reusable materials and label them clearly and appropriately to prevent contamination from other waste materials. Keep receptacles or storage areas neat and clean.

Train subcontractors and other service providers to either separate waste streams or use the co-mingling method as described in the construction waste management plan. Handle hazardous waste and hazardous materials in accordance with applicable regulations and coordinate with Section 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS. Separate materials by one of the following methods described herein:

1.9.1 Source Separation Method

Separate waste products and materials that are recyclable from trash and sort as described below into appropriately marked separate containers and then transport to the respective recycling facility for further processing. Deliver materials in accordance with recycling or reuse facility requirements (e.g., free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process). Separate materials into the category types as defined in the construction waste management plan.

1.9.2 Other Methods

Other methods proposed by the Contractor may be used when approved by the Contracting Officer.

1.10 DISPOSAL

Control accumulation of waste materials and trash. Recycle or dispose of collected materials off-site at intervals approved by the Contracting Officer and in compliance with waste management procedures as described in the waste management plan. Except as otherwise specified in other sections of the specifications, dispose of in accordance with the following:

1.10.1 Recycle

Recycle non-hazardous construction and demolition/debris materials that are not suitable for reuse. Track rejection of contaminated recyclable materials by the recycling facility. Rejected recyclables materials will not be counted as a percentage of diversion calculation. Recycle all fluorescent lamps, HID lamps, mercury (Hg) -containing thermostats and ampoules, and PCBs-containing ballasts and electrical components as directed by the Contracting Officer. Do not crush lamps on site as this creates a hazardous waste stream with additional handling requirements.

1.10.2 Waste

Dispose by landfill or incineration only those waste materials with no

practical use, economic benefit, or recycling opportunity.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 78 00

CLOSEOUT SUBMITTALS

05/19

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SECTION 01 78 00

CLOSEOUT SUBMITTALS
05/19

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

ERDC/ITL TR-12-1 (2015) A/E/C Graphics Standard, Release 2.0

ERDC/ITL TR-12-6 (2015) A/E/C CAD Standard - Release 6.0

1.2 DEFINITIONS

1.2.1 As-Built Drawings

As-built drawings are the marked-up drawings, maintained by the Contractor on-site, that depict actual conditions and deviations from the Contract Documents. These deviations and additions may result from coordination required by, but not limited to: contract modifications; official responses to submitted Requests for Information (RFI's); direction from the Contracting Officer; design that is the responsibility of the Contractor, and differing site conditions. Maintain the as-builts throughout construction as red-lined hard copies on site or red-lined PDF files. These files serve as the basis for the creation of the record drawings.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-03 Product Data

Warranty Management Plan

SD-11 Closeout Submittals

As-Built Drawings; G, RO

Record Drawings; G, RO

As-Built Record of Equipment and Materials

Construction Contract Specifications; G, RO

Certification of EPA Designated Items; G, RO

1.4 QUALITY CONTROL

Additions and corrections to the contract drawings must be equal in quality and detail to that of the originals. Line colors, line weights, lettering, layering conventions, and symbols must conform to ERDC/ITL TR-12-6.

1.5 WARRANTY MANAGEMENT

1.5.1 Warranty Management Plan

Develop a warranty management plan which contains information relevant to FAR 52.246-21 Warranty of Construction in Division 00. At least 30 days before the planned pre-warranty conference, submit one set of the warranty management plan. Include within the warranty management plan all required actions and documents to assure that the Government receives all warranties to which it is entitled. The plan narrative must contain sufficient detail to render it suitable for use by future maintenance and repair personnel, whether tradesmen, or of engineering background, not necessarily familiar with this contract. The term "status" as indicated below must include due date and whether item has been submitted or was accomplished. Submit warranty information, made available during the construction phase, to the Contracting Officer for approval prior to each monthly pay estimate. Assemble approved information in a binder and turn over to the Government upon acceptance of the work. The construction warranty period must begin on the date of project acceptance and continue for the full product warranty period. The warranty management plan must include, but is not limited to, the following:

- a. Roles and responsibilities of personnel associated with the warranty process, including points of contact and telephone numbers within the organizations of the Contractors, subcontractors, manufacturers or suppliers involved.
- b. For each warranty, the name, address, telephone number, and e-mail of each of the guarantor's representatives nearest to the project location.
- c. As-Built Record of Equipment and Materials list for each warranted equipment, item, feature of construction or system indicating:
 - (1) Name of item.
 - (2) Model and serial numbers.
 - (3) Location where installed.
 - (4) Name and phone numbers of manufacturers or suppliers.
 - (5) Names, addresses and telephone numbers of sources of spare parts.
 - (6) Warranties and terms of warranty. Include one-year overall warranty of construction, including the starting date of warranty of construction. Items which have warranties longer than one year must be indicated with separate warranty expiration dates.
 - (7) Cross-reference to warranty certificates as applicable.
 - (8) Starting point and duration of warranty period.

- (9) Summary of maintenance procedures required to continue the warranty in force.
- (10) Cross-reference to specific pertinent Operation and Maintenance manuals.
- (11) Organization, names and phone numbers of persons to call for warranty service.
- (12) Typical response time and repair time expected for various warranted equipment.

1.5.2 Performance Bond

The Performance Bond must remain effective throughout the construction and warranty period .

- a. In the event the Contractor fails to commence and diligently pursue any construction warranty work required, the Contracting Officer will have the work performed by others, and after completion of the work, will charge the remaining construction warranty funds of expenses incurred by the Government while performing the work, including, but not limited to administrative expenses.
- b. In the event sufficient funds are not available to cover the construction warranty work performed by the Government at the Contractor's expense, the Contracting Officer will have the right to recoup expenses from the bonding company.
- c. Following oral or written notification of required construction warranty repair work, respond in a timely manner. Written verification will follow oral instructions. Failure to respond will be cause for the Contracting Officer to proceed against the Contractor.

1.5.3 Pre-Warranty Conference

Prior to contract completion, and at a time designated by the Contracting Officer, meet with the Contracting Officer to develop a mutual understanding with respect to the requirements of this section. At this meeting, establish and review communication procedures for Contractor notification of construction warranty defects, priorities with respect to the type of defect, reasonable time required for Contractor response, and other details deemed necessary by the Contracting Officer for the execution of the construction warranty. In connection with these requirements and at the time of the Contractor's quality control completion inspection, furnish the name, telephone number and address of a licensed and bonded company which is authorized to initiate and pursue construction warranty work action on behalf of the Contractor. This point of contact must be located within the local service area of the warranted construction, be continuously available, and be responsive to Government inquiry on warranty work action and status. This requirement does not relieve the Contractor of any of its responsibilities in connection with other portions of this provision.

PART 2 PRODUCTS

2.1 RECORD DRAWINGS

Prepare the CAD drawing files in MicroStationV8 format compatible with a Windows 7 operating system.

2.1.1 Additional Drawings

If additional drawings are required, prepare them using the specified electronic file format applying ERDC/ITL TR-12-6 and ERDC/ITL TR-12-1. The title block and drawing border to be used for any new final record drawings must be identical to that used on the contract drawings.

2.1.1.1 Sheet Numbers and File Names

If a sheet needs to be added between two sequential sheets, append a Supplemental Drawing Designator in accordance with ERDC/ITL TR-12-6 Adding a drawing sheet, and ERDC/ITL TR-12-1 Adding or deleting drawing sheets and index sheet procedures.

2.2 CERTIFICATION OF EPA DESIGNATED ITEMS

Submit the Certification of EPA Designated Items as required by FAR 52.223-9 Estimate of Percentage of Recovered Material Content for EPA Designated Items and FAR 52-223-17 Affirmative Procurement of EPA designated items in Service and Construction Contracts.. Include on the certification form the following information: project name, project number, Contractor name, license number, Contractor address, and certification. The certification will read as follows and be signed and dated by the Contractor. "I hereby certify the information provided herein is accurate and that the requisition/procurement of all materials listed on this form comply with current EPA standards for recycled/recovered materials content. The following exemptions may apply to the non-procurement of recycled/recovered content materials:

- a. The product does not meet appropriate performance standards;
- b. The product is not available within a reasonable time frame;
- c. The product is not available competitively (from two or more sources);

Record each product used in the project that has a requirement or option of containing recycled content in accordance with SECTION 01 33 29 SUSTAINABILITY REPORTING, noting total price, total value of post-industrial recycled content, total value of post-consumer recycled content, exemptions (1, 2, 3, or 4, as indicated), and comments. Recycled content values may be determined by weight or volume percent, but must be consistent throughout.

PART 3 EXECUTION

3.1 AS-BUILT DRAWINGS

Provide and maintain two black line print copies of the PDF contract drawings for As-Built Drawings. As-Built Drawings 30 days prior to Beneficial Occupancy Date (BOD).

3.1.1 Markup Guidelines

Make comments and markup the drawings complete without reference to letters, memos, or materials that are not part of the As-Built drawing. Show what was changed, how it was changed, where item(s) were relocated and change related details. These working as-built markup prints must be neat, legible and accurate as follows:

- a. Use base colors of red, green, and blue. Color code for changes as follows:
 - (1) Special (Blue) - Items requiring special information, coordination, or special detailing or detailing notes.
 - (2) Deletions (Red) - Over-strike deleted graphic items (lines), lettering in notes and leaders.
 - (3) Additions (Green) - Added items, lettering in notes and leaders.
- b. Provide a legend if colors other than the "base" colors of red, green, and blue are used.
- c. Add and denote any additional equipment or material facilities, service lines, incorporated under As-Built Revisions if not already shown in legend.
- d. Use frequent written explanations on markup drawings to describe changes. Do not totally rely on graphic means to convey the revision.
- e. Use legible lettering and precise and clear digital values when marking prints. Clarify ambiguities concerning the nature and application of change involved.
- f. Wherever a revision is made, also make changes to related section views, details, legend, profiles, plans and elevation views, schedules, notes and call out designations, and mark accordingly to avoid conflicting data on all other sheets.
- g. For deletions, cross out all features, data and captions that relate to that revision.
- h. For changes on small-scale drawings and in restricted areas, provide large-scale inserts, with leaders to the applicable location.
- i. Indicate one of the following when attaching a print or sketch to a markup print:
 - (1) Add an entire drawing to contract drawings
 - (2) Change the contract drawing to show
 - (3) Provided for reference only to further detail the initial design.
- j. Incorporate all shop and fabrication drawings into the markup drawings.

3.1.2 As-Built Drawings Content

Revise As-Built Drawings in accordance with ERDC/ITL TR-12-1 and ERDC/ITL TR-12-6. Keep these working as-built markup drawings current on a

weekly basis and at least one set available on the jobsite at all times. Changes from the contract drawings which are made during construction or additional information which might be uncovered in the course of construction must be accurately and neatly recorded as they occur by means of details and notes. Submit the working as-built markup drawings for approval prior to submission of each monthly pay estimate. For failure to maintain the working and final record drawings as specified herein, the Contracting Officer will withhold 10 percent of the monthly progress payment until approval of updated drawings. Show on the as-built drawings, but not limited to, the following information:

- a. The actual location, kinds and sizes of all sub-surface utility lines. In order that the location of these lines and appurtenances may be determined in the event the surface openings or indicators become covered over or obscured, show by offset dimensions to two permanently fixed surface features the end of each run including each change in direction on the record drawings. Locate valves, splice boxes and similar appurtenances by dimensioning along the utility run from a reference point. Also record the average depth below the surface of each run.
- b. The location and dimensions of any changes to the structure.
- d. Correct grade, elevations, cross section, or alignment of roads, earthwork, structures or utilities if any changes were made from contract plans.
- e. Changes in details of design or additional information obtained from working drawings specified to be prepared or furnished by the Contractor; including but not limited to shop drawings, fabrication, erection, installation plans and placing details.
- f. The topography, invert elevations and grades of drainage installed or affected as part of the project construction.
- g. Changes or Revisions which result from the final inspection.
- h. Where contract drawings or specifications present options, show only the option selected for construction on the working as-built markup drawings.
- i. If borrow material for this project is from sources on Government property, or if Government property is used as a spoil area, furnish a contour map of the final borrow pit/spoil area elevations.
- k. Changes in location of equipment and architectural features.
- l. Modifications.
- m. Actual location of anchors, construction and control joints, etc., in concrete.
- n. Unusual or uncharted obstructions that are encountered in the contract work area during construction.
- o. Location, extent, thickness, and size of stone protection particularly where it will be normally submerged by water.

- p. Modifications (include within change order price the cost to change working and final record drawings to reflect modifications) and compliance with the following procedures.
- (1) Follow directions in the modification for posting descriptive changes.
 - (2) Place a Modification Circle at the location of each deletion.
 - (3) For new details or sections which are added to a drawing, place a Modification Circle by the detail or section title.
 - (4) For minor changes, place a Modification Circle by the area changed on the drawing (each location).
 - (5) For major changes to a drawing, place a Modification Circle by the title of the affected plan, section, or detail at each location.
 - (6) For changes to schedules or drawings, place a Modification Circle either by the schedule heading or by the change in the schedule.
 - (7) The Modification Circle size shall be 1/2 inch diameter unless the area where the circle is to be placed is crowded. Smaller size circle shall be used for crowded areas.

3.2 RECORD DRAWINGS

Prepare final record drawings after the completion of each definable phase of work as listed in the Contractor Quality Control Plan (such as Foundations, Utilities, or Structural Steel as appropriate for the project). Transfer the changes from the approved working as-built markup drawings to the original electronic CAD drawing files. Modify the as-built CAD drawing files to correctly show the features of the project as-built by bringing the working CAD drawing set into agreement with approved working as-built markup drawings, and adding such additional drawings as may be necessary. Refer to ERDC/ITL TR-12-1. Jointly review the working as-built markup drawings with printouts from working as-built CAD drawing PDF files for accuracy and completeness. Monthly review of working as-built CAD drawing PDF file printouts must cover all sheets revised since the previous review. These PDF drawing files are part of the permanent records of this project. Any drawings damaged or lost must be satisfactorily replaced at no expense to the Government.

Drawing revisions (include within change order price the cost to change working and final record drawings to reflect revisions) and compliance with the following procedures.

- (1) Follow directions in the revision for posting descriptive changes.
- (2) The revision delta size must be 5/16 inch unless the area where the delta is to be placed is crowded. Use a smaller size delta for crowded areas.
- (3) Place a revision delta at the location of each deletion.
- (4) For new details or sections which are added to a drawing, place a revision delta by the detail or section title.

- (5) For minor changes, place a revision delta by the area changed on the drawing (each location).
- (6) For major changes to a drawing, place a revision delta by the title of the affected plan, section, or detail at each location.
- (7) For changes to schedules or drawings, place a revision delta either by the schedule heading or by the change in the schedule.

3.3 CONSTRUCTION CONTRACT SPECIFICATIONS

Submit final PDF file record construction contract specifications, including revisions thereto, 30 days after transfer of the completed facility.

3.4 AS-BUILT RECORD OF EQUIPMENT AND MATERIALS

Furnish one copy of preliminary record of equipment and materials used on the project 15 days prior to final inspection. This preliminary submittal will be reviewed and returned 2 days after final inspection with Government comments. Submit Two sets of final record of equipment and materials 10 days after final inspection. Key the designations to the related area depicted on the contract drawings. List the following data:

RECORD OF DESIGNATED EQUIPMENT AND MATERIALS DATA				
Description	Specification Section	Manufacturer and Catalog, Model, and Serial Number	Composition and Size	Where Used

3.5 CLEANUP

Remove waste and surplus materials, rubbish and construction facilities from the site.

-- End of Section --

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08/18, CHG 2: 05/21

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SECTION 05 12 00

STRUCTURAL STEEL
08/18, CHG 2: 05/21

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

AISC 303	(2016) Code of Standard Practice for Steel Buildings and Bridges
AISC 325	(2017) Steel Construction Manual
AISC 326	(2009) Detailing for Steel Construction
AISC 360	(2016) Specification for Structural Steel Buildings

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME B46.1	(2020) Surface Texture, Surface Roughness, Waviness and Lay
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ASTM INTERNATIONAL (ASTM)

ASTM A6/A6M	(2021) Standard Specification for General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling
ASTM A123/A123M	(2017) Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A563	(2015) Standard Specification for Carbon and Alloy Steel Nuts
ASTM A780/A780M	(2020) Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings
ASTM B695	(2021) Standard Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel
ASTM F436/F436M	(2019) Standard Specification for Hardened Steel Washers Inch and Metric Dimensions
ASTM F1136/F1136M	(2011) Standard Specification for Zinc/Aluminum Corrosion Protective Coatings for Fasteners

ASTM F2329/F2329M	(2015) Standard Specification for Zinc Coating, Hot-Dip, Requirements for Application to Carbon and Alloy Steel Bolts, Screws, Washers, Nuts, and Special Threaded Fasteners
ASTM F2833	(2011; R 2017) Standard Specification for Corrosion Protective Fastener Coatings with Zinc Rich Base Coat and Aluminum Organic/Inorganic Type
ASTM F3125/F3125M	(2019) Standard Specification for High Strength Structural Bolts and Assemblies, Steel and Alloy Steel, Heat Treated, Inch Dimensions 120 ksi and 150 ksi Minimum Tensile Strength, and Metric Dimensions 830 MPa and 1040 MPa Minimum Tensile Strength

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR Part 1926, Subpart R Steel Erection

1.2 SUBMITTALS

Government approval is required for submittals with a "G" classification. Submittals not having a "G" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Rivet Fabrication Drawings; G, DO

SD-02 Shop Drawings

Fabrication Drawings Including Details of Connections; G, RO

SD-03 Product Data

Tension Control Bolts; G, DO

SD-06 Test Reports

Bolts, Nuts, and Washers; G, RO

SD-07 Certificates

Bolts, Nuts, and Washers; G, RO

Galvanizing; G, RO

1.3 QUALITY ASSURANCE

1.3.1 Rivet Fabrication Drawing Requirements

Submit rivet fabrication drawings for approval prior to fabrication. Prepare in accordance with AISC 303, AISC 326 and AISC 325. Fabrication drawings must not be reproductions of contract drawings. Sign and seal fabrication drawings by a registered professional engineer in the State of Kansas. Include complete information for the fabrication and erection of the structure's components, including the location, type, and size of bolts, welds, member sizes and lengths, connection details, blocks, copes, and cuts. Clearly highlight any deviations from the details shown on the contract drawings highlighted on the fabrication drawings. Explain the reasons for any deviations from the contract drawings.

PART 2 PRODUCTS

2.1 STEEL

2.2 BOLTS, NUTS, AND WASHERS

Submit the certified manufacturer's mill reports which clearly show the applicable ASTM mechanical and chemical requirements together with the actual test results for the supplied fasteners.

2.2.1 High-Strength Bolts

High strength bolts and nuts must be shipped together in the same shipping container. Fasteners indicated to be galvanized shall be tested by the supplier to show that the galvanized nut with the supplied lubricant provided may be rotated from the snug tight condition well in excess of the rotation required for pretensioned installation without stripping. The supplier shall supply nuts that have been lubricated and tested with the supplied bolts.

2.2.1.1 Bolts

ASTM F3125/F3125M, Grade A325, Type 1 Heavy Hex Head Style, plain finish hot dipped zinc coating.

2.2.1.2 Nuts

ASTM A563, Grade and Style as specified in the applicable ASTM bolt standard.

2.2.1.3 Washers

ASTM F436/F436M, plain finish hot dipped zinc coating.

2.3 STRUCTURAL STEEL ACCESSORIES

2.4 GALVANIZING

ASTM F2329/F2329M, ASTM F1136/F1136M, ASTM F2833 or ASTM B695 for threaded parts or ASTM A123/A123M for structural steel members, as applicable, unless specified otherwise galvanize after fabrication where practicable.

2.5 FABRICATION

Fabrication must be in accordance with the applicable provisions of AISC 325. Fabrication and assembly must be done in the shop to the greatest extent possible. Punch, subpunch and ream, or drill rivet holes perpendicular to the surface of the member.

Compression joints depending on contact bearing must have a surface roughness not in excess of 500 micro inch as determined by ASME B46.1, and ends must be square within the tolerances for milled ends specified in ASTM A6/A6M.

2.5.1 Surface Finishes

ASME B46.1 maximum surface roughness of 125 for pin, pinholes, and sliding bearings, unless indicated otherwise.

PART 3 EXECUTION

3.1 ERECTION

- a. Erection of structural steel must be in accordance with the applicable provisions of AISC 325, AISC 303 and 29 CFR Part 1926, Subpart R.

3.1.1 STORAGE

Store the material out of contact with the ground in such manner and location as to minimize deterioration.

3.2 CONNECTIONS

Except as modified in this section, design connections indicated in accordance with AISC 360. Build connections into existing work. Holes must not be cut or enlarged by burning. Bolts, nuts, and washers must be clean of dirt and rust, and lubricated immediately prior to installation.

3.2.1 High-Strength Bolts

Grade A325 and Grade A490 bolted connections. Bolts must be installed in connection holes and initially brought to a snug tight fit. After the initial tightening procedure, fully tension bolts using the Turn-of-Nut Method by tightening nut an additional 1/3 to 1/2 turn, progressing from the most rigid part of a connection to the free edges.

Fastener components shall be protected from dirt and moisture in closed containers at the site of the installation. Fastener components that are not incorporated into the work shall be returned to protected storage at the end of the work shift.

3.3 GAS CUTTING

Use of gas-cutting torch in the field for correcting fabrication errors is not permitted on any major member in the structural framing. Use of a gas cutting torch with scarfing tip will be permitted only for problematic rivet removal, but not on any structural members that are under stress, and only after approval has been obtained from the Contracting Officer.

3.4 SHOP PRIMER REPAIR

Repair shop primer in accordance with the paint manufacturer's recommendation for surfaces damaged by handling, transporting, cutting, welding, or bolting.

3.4.1 Field Priming

Field prime steel exposed to the weather, or located in building areas without HVAC for control of relative humidity. After erection, the field bolt heads and nuts, field welds, and any abrasions in the shop coat must be cleaned and primed with paint of the same quality as that used for the shop coat.

3.5 GALVANIZING REPAIR

Repair damage to galvanized coatings using ASTM A780/A780M zinc rich paint for galvanizing damaged by handling, transporting, cutting, welding, or bolting. Do not heat surfaces to which repair paint has been applied.

3.6 FIELD QUALITY CONTROL

Perform field tests, and provide labor, equipment, and incidentals required for testing. Notify the Contracting Officer in writing of defective bolts, nuts, and washers within 7 working days of the date of the inspection.

3.6.1 High-Strength Bolts

3.6.1.1 Testing

The Government has the option to perform nondestructive tests on 5 percent of the installed bolts to verify compliance with pre-load bolt tension requirements. Provide the required access for the Government to perform the tests. The nondestructive testing will be done in-place using an ultrasonic measuring device or any other device capable of determining in-place pre-load bolt tension. The test locations must be selected by the Contracting Officer. If more than 10 percent of the bolts tested contain defects identified by testing, then all bolts used from the batch from which the tested bolts were taken, must be tested at the Contractor's expense. Retest new bolts after installation at the Contractor's expense.

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SECTION 09 97 02

PAINTING: BRIDGE STRUCTURE
11/09

PART 1 GENERAL

1.1 LUMP SUM PRICE

1.1.1 Painting: Bridge Structure

1.1.1.1 Payment

Payment will be made for costs associated with "Painting: Bridge Structure", which includes full compensation for furnishing all materials, equipment, and labor required to paint the bridge substructure steel bents in accordance with this section.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM D153	(1984; R 2014) Specific Gravity of Pigments
ASTM D281	(2012; R 2016) Standard Test Method for Oil Absorption of Pigments by Spatula Rub-Out
ASTM D520	(2000; R 2011) Zinc Dust Pigment
ASTM D561	(1982; R 2014) Carbon Black Pigment for Paint
ASTM D740	(2011) Methyl Ethyl Ketone
ASTM D841	(2017) Standard Specification for Nitration Grade Toluene
ASTM D962	(1981; R 2014) Aluminum Powder and Paste Pigments for Paints
ASTM D1045	(2019) Standard Test Methods for Sampling and Testing Plasticizers Used in Plastics
ASTM D1152	(2006; R 2012) Methanol (Methyl Alcohol)
ASTM D1153	(2012) Methyl Isobutyl Ketone
ASTM D1200	(2010; R 2014) Viscosity by Ford Viscosity Cup
ASTM D1210	(2005; R 2014) Fineness of Dispersion of

	Pigment-Vehicle Systems by Hegman-Type Gage
ASTM D2917	(2007; R 2013) Methyl Isoamyl Ketone
ASTM D3721	(2005; R 2011) Synthetic Red Iron Oxide Pigment
ASTM D4417	(2014) Field Measurement of Surface Profile of Blast Cleaned Steel
ASTM D4228	(2017) Standard Practice for Qualification of Coating Applicators for Application of Coatings to Steel Surfaces
ASTM D7091	(2013) Standard Practice for Nondestructive Measurement of Dry Film Thickness of Nonmagnetic Coatings Applied to Ferrous Metals and Nonmagnetic, Nondestructive Coatings Applied to Non-Ferrous Metals
ASTM E1347	(2006; R 2011) Color and Color Difference Measurement by Tristimulus (Filter) Colorimetry

INTERNATIONAL SAFETY EQUIPMENT ASSOCIATION (ISEA)

ANSI/ISEA Z87.1	(2015) Occupational and Educational Personal Eye and Face Protection Devices
ANSI/ISEA Z358.1	(2014) American National Standard for Emergency Eyewash and Shower Equipment

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70	(2017; ERTA 1-2 2017; TIA 17-1; TIA 17-2; TIA 17-3; TIA 17-4; TIA 17-5; TIA 17-6; TIA 17-7; TIA 17-8; TIA 17-9; TIA 17-10; TIA 17-11; TIA 17-12; TIA 17-13; TIA 17-14; TIA 17-15; TIA 17-16; TIA 17-17) National Electrical Code
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NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)

NIOSH 2003-154	(2003; 4th Ed; Supple 3) NIOSH Manual of Analytical Methods
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SOCIETY FOR PROTECTIVE COATINGS (SSPC)

SSPC Guide 6	(2015) Guide for Containing Surface Preparation Debris Generated During Paint Removal Operations
SSPC QP 1	(2012; E 2012) Standard Procedure for Evaluating Painting Contractors (Field Application to Complex Industrial Structures)
SSPC QP 2	(2009; E 2013) Standard for Evaluating

Painting Contractors (Removal of Hazardous
Coatings from Industrial/Marine Structures)

SSPC SP 1 (2015) Solvent Cleaning
SSPC SP 5/NACE No. 1 (2007) White Metal Blast Cleaning
SSPC-TU 7 (2015) Conducting Ambient Air, Soil, and
Water Sampling of Surface Preparation and
Paint Disturbance Activities

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2019) Safety and Health Requirements
Manual

U.S. GENERAL SERVICES ADMINISTRATION (GSA)

FED-STD-595 (Rev C; Notice 1) Colors Used in
Government Procurement

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910 Occupational Safety and Health Standards
29 CFR 1910.20 Access to Employee Exposure and Medical
Records
29 CFR 1910.27 (2016) Scaffolds and Rope Descent Systems
29 CFR 1910.29 (2016) Fall Protection System and Falling
Object Protection - Criteria and Practices
29 CFR 1910.94 Ventilation
29 CFR 1910.134 Respiratory Protection
29 CFR 1910.146 Permit-required Confined Spaces
29 CFR 1926.62 Lead
40 CFR 117 Determination of Reportable Quantities for
Hazardous Substances
40 CFR 122 EPA Administered Permit Programs: The
National Pollutant Discharge Elimination
System
40 CFR 261 Identification and Listing of Hazardous
Waste
40 CFR 262 Standards Applicable to Generators of
Hazardous Waste
40 CFR 262.22 Number of Copies
40 CFR 263 Standards Applicable to Transporters of
Hazardous Waste

40 CFR 302	Designation, Reportable Quantities, and Notification
40 CFR 355	Emergency Planning and Notification
49 CFR 171	General Information, Regulations, and Definitions

1.3 SAFETY, HEALTH, AND ENVIRONMENTAL REQUIREMENTS

Perform work in accordance with all applicable health, safety, and environmental requirements as well as EM 385-1-1. Submit matters of interpretation of these requirements to the Contracting Officer for resolution before starting work. If no clarifications are sought, then the submittal is not necessary. Where the regulations conflict, the most stringent requirements shall apply. This paragraph supplements the health, safety, and environmental requirements of EM 385-1-1.

1.3.1 Safety

Submit a Safety Plan in accordance with the requirements of Section 01 of EM 385-1-1, including, but not limited to, each of the topic areas listed in Appendix A therein and the specified requirements. Develop each topic in a concise manner to include management and operational aspects. Submit a Ventilation Assessment Plan complying with all applicable safety standards. Scaffolding and fall protection systems shall comply with the requirements in EM 385-1-1, 29 CFR 1910.27, and 29 CFR 1910.29.

1.3.1.1 Abrasive Blasting

For abrasive blasting comply with the requirements in Section 06.H of EM 385-1-1. During all abrasive blasting operations all blasters and any worker who is in the containment area while blasting is performed shall use approved SCUBA or SAR (air lines) respirators. Persons with facial hair that interferes with the sealing surface of the facepiece to face seal or interferes with respirator valve function shall not be allowed to perform work requiring respiratory protection. In addition to the requirements in Section 20 of EM 385-1-1, use hoses and hose connections of a type to prevent shock from static electricity. Hose lengths shall be joined together by approved couplings of a material and type designed to prevent erosion and weakening of the couplings. The couplings and nozzle attachments shall fit on the outside of the hose and designed to prevent accidental disengagement.

1.3.1.2 Workers Other Than Blasters

Protect workers, other than blasting operators working in close proximity to abrasive blasting operations, by utilizing MSHA/NIOSH-approved half-face or full-face air purifying respirators equipped with high-efficiency particulate air (HEPA) filters, eye protection meeting or exceeding ANSI/ISEA Z87.1 and hearing protectors (ear plugs and/or ear muffs) providing a noise reduction rating of at least 20 dBA or as needed to provide adequate protection. Personal protective equipment shall be provided where required by 29 CFR 1910.146 and in accordance with 29 CFR 1910, Subpart I.

1.3.1.3 Cleaning Before and After Abrasive Blasting

Manual or power sanding or grinding of lead surfaces or materials is not

permitted unless tools are equipped with HEPA attachments or wet methods. Do not dry sweep or use pressurized air to clean up the area. At the end of each shift and when the lead operation has been completed, clean the controlled area of visible contamination by vacuuming with a HEPA filtered vacuum cleaner, wet mopping the area and wet wiping the area as indicated by the Lead Compliance Plan. Reclean areas showing dust or debris. Cleaning with compressed air shall be in accordance with Section 20.B.5 of EM 385-1-1 and personnel shall be protected as specified in 29 CFR 1910.134. When cleaning with solvents, provide ventilation where required by 29 CFR 1910.146 or where the concentration of solvent vapors exceeds 10 percent of the Lower Explosive Limit (LEL). Ventilation shall be in accordance with 29 CFR 1910.94, paragraph (c) (5).

1.3.1.4 Pretreatment of Metals and Concrete with Acids

Personnel shall be protected in accordance with 29 CFR 1910, Subpart I. In addition to the requirements of Section 05 of EM 385-1-1, provide an eyewash in accordance with ANSI/ISEA Z358.1, paragraph (6).

1.3.1.5 Paint Mixing

Local exhaust ventilation shall be provided in the area where coatings are mixed. This ventilation system shall be capable of providing at least 100 linear fpm of capture velocity in the mixing zone. Exposure of skin and eyes shall be avoided by wearing appropriate chemically resistant gloves, apron, safety goggles, and face shields meeting or exceeding the requirements of ANSI/ISEA Z87.1. A combination unit, comprised of an eyewash and deluge shower, within close proximity to the mixing operation shall be provided in accordance with ANSI/ISEA Z358.1, paragraph (9). Individuals who have a history of, or develop a sensitivity to epoxy or polyurethane resin systems, shall not conduct work tasks or otherwise be exposed to such chemicals

1.3.1.6 Confined Spaces

When using solvent-based paint in confined spaces, prepare a Confined Spaces Plan. Comply with the requirements in Section 34 of USACE EM 385-1-1, OSHA 29 CFR 1910, OSHA 29 CFR 1910.146, OSHA Directive CPL 2.100 and OSHA 29 CFR 1926. Any potential for a hazard in the confined space requires a permit system to be used. Provide ventilation to exchange air in the space at a minimum rate of 5,000 cubic feet per minute per spray gun in operation. Prohibit entry into a confined space by personnel for any purpose, including hot work, until the qualified person has conducted appropriate tests to ensure the confined or enclosed space is safe for the work intended and that all potential hazards are controlled or eliminated and documented. (See Section 34 of USACE EM 385-1-1 for entry procedures.) All hazards pertaining to the space shall be reviewed with each employee during review of the AHA. It may be necessary to install both a mechanical supply and exhaust ventilation system to effect adequate air changes within the confined space. Locate and affix all air-moving devices to an opening of the confined space in a manner assuring that the airflow is not restricted or short circuited and is supplied in the proper direction. Means of egress shall not be blocked. Continue ventilation after completion of painting and through the drying phase of the operation. If the ventilation system fails or the concentration of volatiles exceeds 10 percent of the LEL (except in the zone immediately adjacent to the spray nozzle), stop painting and evacuate spaces until adequate ventilation is provided. Provide an audible alarm that signals system failure as an integral part of the ventilation system. The effectiveness of the

ventilation shall be checked by using ventilation smoke tubes and making frequent oxygen and combustible gas readings during painting operations. Exhaust ducts shall discharge clear of the working areas and away from possible sources of ignition. Submit detailed written standard operating procedures for confined spaces in accordance with 29 CFR 1910.146 and EM 385-1-1, Section 6I. The procedures shall include:

- a. Certificates of calibration for all testing and monitoring equipment. The certificates of calibration shall include: type of equipment, model number, date of calibration, firm conducting calibration, and signature of individual certifying calibration.
- b. Methods of inspection of personal protective equipment prior to use.
- c. Work practices and other engineering controls designed to reduce airborne hazardous chemical exposures to a minimum.
- d. Specification of the design and installation of ventilation systems which shall provide adequate oxygen content and provide for the dilution of paint solvent vapor, lead, and other toxic particulates within the confined space. In addition, include plans to evaluate the adequacy of air flow patterns.

1.3.1.7 Paint Spraying

Submit a comprehensive written Respiratory Protection Plan in accordance with 29 CFR 1910.134, 29 CFR 1926.62, and Section 05.G of EM 385-1-1. During all spray painting operations, spray painters shall use approved SCUBA or SAR (air line) respirators, unless valid air sampling has demonstrated contaminant levels to be consistently within concentrations that are compatible with air-purifying respirator Assigned Protection Factor (APF). Persons with facial hair that interferes with the sealing surface of the facepiece to face seal or interferes with respirator valve function shall not be allowed to perform work requiring respiratory protection. Air-purifying chemical cartridge/canister half- or full-facepiece respirators that have a particulate prefilter and are suitable for the specific type(s) of gas/vapor and particulate contaminant(s) may be used for nonconfined space painting, mixing, and cleaning (using solvents). These respirators may be used provided the measured or anticipated concentration of the contaminant(s) in the breathing zone of the exposed worker does not exceed the APF for the respirator and the gas/vapor has good warning properties or the respirator assembly is equipped with a NIOSH-approved end of service life indicator for the gas(es)/vapor anticipated or encountered. Where paint contains toxic elements that may become airborne during painting in nonconfined spaces, air-purifying half- and full-facepiece respirators or powered air-purifying respirators equipped with appropriate gas vapor cartridges, in combination with a high-efficiency filter, or an appropriate canister incorporating a high-efficiency filter, shall be used.

1.3.1.8 Explosion Proof Equipment

Electrical wiring, lights, and other equipment located in the paint spraying area shall be of the explosion proof type designed for operation in Class I, Division 1, Group D, hazardous locations as required by the NFPA 70. Electrical wiring, motors, and other equipment, outside of but within 20 feet of any spraying area, shall not spark and shall conform to the provisions for Class I, Division 2, Group D, hazardous locations. Electric motors used to drive exhaust fans shall not be placed inside

spraying areas or ducts. Fan blades and portable air ducts shall be constructed of nonferrous materials. Motors and associated control equipment shall be properly maintained and grounded. The metallic parts of air-moving devices, spray guns, connecting tubing, and duct work shall be electrically bonded and the bonded assembly shall be grounded.

1.3.1.9 Further Precautions

- a. Workers must wear nonsparking safety shoes.
- b. Place and ground solvent drums, taken into the spraying area, on nonferrous surfaces. Maintain metallic bonding between containers and drums when materials are being transferred.
- c. Inspect insulation on all power and lighting cables to ensure that the insulation is in excellent working condition and is free of all cracks and worn spots. Cables shall be further inspected to ensure that no connections are within 50 feet of the operation, that lines are not overloaded, and that they are suspended with sufficient slack to prevent undue stress or chafing.

1.3.1.10 Lead Control Area Requirements

A full containment system will be used to prevent the spread of lead (and other metals such as cadmium and chromium) dust, paint chips or debris to adjacent areas. The system will employ the use of a negative pressure enclosure system with decontamination facilities and with HEPA filtered exhaust if required by the CP. For containment areas larger than 1,000 square feet install a minimum of two 18 inch square viewing ports. Locate ports to provide a view of the required work from the exterior of the enclosed contaminated area. Glaze ports with laminated safety glass.

1.3.1.11 Ignition Sources

Ignition sources, to include lighted cigarettes, cigars, pipes, matches, or cigarette lighters shall be prohibited in area of solvent cleaning, paint storage, paint mixing, or paint application.

1.3.2 Health

Prepare and submit a Medical Surveillance Plan and a statement from the examining physician indicating the name of each employee evaluated and any limitations which will preclude the employee from performing the work required. The statement shall include the date of the medical evaluation, the physician's name, signature, and telephone number..

1.3.2.1 Air Monitoring

Prepare and submit an Air Monitoring Test Plan. Perform air sampling and testing as needed to assure that workers are not exposed to contaminants above the permissible exposure limit. In addition, provide the Contracting Officer with a copy of the Air Monitoring Test Report from the laboratory within five working days of the sampling date, including records of air monitoring plans and tests performed. Submit reports as soon as information is available. Also provide results from direct-reading instrumentation on the same day the samples are collected. Prepare and submit an Airborne Sampling Plan detailing the NIOSH 2003-154, Factory Mutual, or Underwriters Laboratories approved equipment, equipment calibration procedures, sampling methods, sampling to be performed, and

analytical procedures to be used based on the type of work to be performed and anticipated toxic contaminants to be generated. Include the name of the accredited laboratory, listed by the American Industrial Hygiene Association (AIHA), to be used to conduct the analysis of any collected air samples.

1.3.2.2 Air and Wipe Sampling

Conduct sampling for lead in accordance with 29 CFR 1926.62, SSPC-TU 7 and as specified herein. Air and wipe sampling shall be directed or performed by the CP.

- a. The CP shall be on the job site directing the air and wipe sampling and inspecting the Paint with Lead (PWL) or Material Containing Lead (MCL) removal work to ensure that the requirements of the contract have been satisfied during the entire PWL or MCL operation.
- b. Collect personal air samples on employees who are anticipated to have the greatest risk of exposure as determined by the CP. In addition, collect air samples on at least twenty-five percent of the work crew or a minimum of two employees, whichever is greater, during each work shift. Rotate the personnel sampled each time to extent possible.
- c. Submit results of air samples, signed by the CP, within 72 hours after the air samples are taken.
- d. Conduct area air sampling daily, on each shift in which lead-based paint removal operations are performed, in areas immediately adjacent and downwind to the lead control area. Sufficient area monitoring shall be conducted to ensure unprotected personnel are not exposed at or above 30 micrograms per cubic meter of air. If 30 micrograms per cubic meter of air is reached or exceeded, stop work, correct the conditions(s) causing the increased levels. Notify the Contracting Officer immediately. Determine if condition(s) require any further change in work methods. Removal work shall resume only after the CP and the Contracting Officer give approval. Additional air sampling will be required at residences, businesses, and schools when abatement activities are within 100 feet of said residences, businesses, and schools.

1.3.2.3 Medical Status

Prior to the start of work, and after completion of the work, submit a Medical Status Report including records of medical tests. Medically evaluate all Contractor employees working with or around paint systems, thinners, blast media, those required to wear respiratory protective equipment, and those who will be exposed to high noise levels for the particular type of exposure they may encounter. Maintain medical records as required by 29 CFR 1910.20. The evaluation shall include:

- a. Audiometric testing and evaluation of employees who will work in a noise environment with a time weighted average greater than or equal to 90 dBA.
- b. Vision screening (employees who use full-facepiece respirators shall not wear contact lenses).
- c. Medical evaluation shall include, but shall not be limited to, the following:

- (1) Medical history including, but not limited to, alcohol use, with emphasis on liver, kidney, and pulmonary systems, and sensitivity to chemicals to be used on the job.
- (2) General physical examination with emphasis on liver, kidney, and pulmonary system.
- (3) Determination of the employee's physical and psychological ability to wear respiratory protective equipment and to perform job-related tasks.
- (4) Determination of baseline values of biological indices for later comparison to changes associated with exposure to paint systems and thinners or blast media, which include: liver function tests to include SGOT, SGPT, GGPT, alkaline phosphates, bilirubin, complete urinalysis, EKG (employees over age 40), blood urea nitrogen (bun), serum creatinine, pulmonary function test, FVC, and FEV, chest x-ray (if medically indicated), blood lead and ZPP (for individuals where it is known there will be an exposure to materials containing lead), other criteria that may be deemed necessary by the Contractor's physician, and Physician's statements for individual employees that medical status would permit specific task performance.
- (5) For lead-based paint removal, the medical requirements of 29 CFR 1926.62 shall also be included. Prepare and submit a Worker Protection Plan in accordance with the requirements of 29 CFR 1926.62, addressing all necessary aspects of worker protection and including activities emitting lead, means to achieve compliance, alternative technologies considered, air monitoring program, implementation schedule, work practice program, administrative controls, multi-Contractor site arrangements, and jobsite inspections.

1.3.2.4 Change in Medical Status

Any employee whose medical status has changed negatively due to work related chemical and/or physical agent exposure while working with or around paint systems and thinners, blast media, or other chemicals shall be evaluated by a physician, and obtain a physicians statement as described in paragraph MEDICAL STATUS prior to allowing the employee to return to those work tasks. Submit a Change in Medical Status Report detailing any negative changes in employee medical status and the results of the physicians reevaluation statement.

1.3.2.5 Lead Compliance Plan

Submit a detailed job-specific plan of the work procedures to be used in the disturbance of PWL or MCL. The plan shall include figures showing the location, size, and details of lead control areas, critical barriers, physical boundaries, location and details of decontamination facilities, viewing ports, and mechanical ventilation system. Include a description of equipment and materials, work practices, controls and job responsibilities for each activity from which lead is emitted. Include in the plan, eating, drinking, smoking, hygiene facilities and sanitary procedures, interface of trades, sequencing of lead related work, collected waste water and dust containing lead and debris, air sampling, respirators, personal protective equipment, and a detailed description of the method of containment of the

operation to ensure that lead is not released outside of the lead control area. Include site preparation, cleanup and clearance procedures. Include occupational and environmental sampling, training and strategy, sampling and analysis strategy and methodology, frequency of sampling, duration of sampling, and qualifications of sampling personnel in the air sampling portion of the plan. Include a description of arrangements made among contractors on multicontractor worksites to inform affected employees and to clarify responsibilities to control exposures.

The plan shall also include a protection program that describes the measures that will be taken during the work to notify and protect the residents living within 100 feet of a portion of the bridge. This plan shall include a spill/release plan to be activated in case of a spill/release and address cleaning, sampling, and analyzing, businesses.

1.3.3 Environmental Protection

In addition to the requirements of Section 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS, prepare an Environmental Protection Plan incorporating the submittals for Waste Classification, Handling, and Disposal, Water Quality Plan, Containment Plan, and Soil Quality Plan. The submitted plan shall also address all aspects of establishing and demarcating regulated areas, ventilation/containment system performance verification, and reporting of accidental releases. Comply with the following environmental protection criteria.

1.3.3.1 Waste Classification, Handling, and Disposal

Prepare and submit a Waste Disposal Plan in accordance with the requirements of 40 CFR 261 and 40 CFR 262 including classification and handling. The Contractor is responsible for assuring the proper disposal of all hazardous and nonhazardous waste generated during the project. Waste generated from abrasive blasting, lead-containing paints with recyclable steel or iron abrasives shall be disposed of as a hazardous waste or shall be stabilized with proprietary pre-blast additives regardless of the results of 40 CFR 261 App II, Mtd 1311. Where stabilization is preferred, employ a proprietary blast additive, that has been blended with the blast media prior to use. Place hazardous waste in properly labeled, closed containers shielded adequately to prevent dispersion of the waste by wind or water. Any evidence of improper storage shall be cause for immediate shutdown of the project until corrective action is taken. Store nonhazardous waste in closed containers separate from hazardous waste storage areas. All hazardous waste shall be transported by a licensed transporter in accordance with 40 CFR 263 and 49 CFR 171, Subchapter C. Transport all nonhazardous waste in accordance with local regulations regarding waste transportation. In addition to the number of copies required by 40 CFR 262.22, supply one copy of each Waste Manifest to the Contracting Officer prior to transportation.

1.3.3.2 Containment

Prepare a Containment Plan for containing debris generated during paint removal operations, including drawings, load-bearing capacity calculations, and wind load calculations.

Locate ports to provide a view of the required work from the exterior of the enclosed contaminated area. Glaze ports with laminated safety glass. When the design is such that the spent abrasive is allowed to accumulate in

quantities greater than 1,000 pounds, and/or impart a significant wind load on the structure, have the drawings approved by a registered structural engineer. The drawings and calculations shall be stamped with the engineer's seal. Also identify the type and placement of water booms, methods for anchoring the booms, and the procedures for removing debris. Contain debris generated during paint removal operations in accordance with the requirements of SSPC Guide 6, Class 2A. Where required, verify the containment air pressure by instrument.

Work shall be halted in the event of a breach of the containment system.

1.3.3.3 Cleanup

Maintain surfaces of the lead control area free of accumulations of dust and debris. Restrict the spread of dust and debris; keep waste from being distributed over the work area. Do not dry sweep or use pressurized air to clean up the area. At the end of each shift and when the lead operation has been completed, clean the controlled area of visible contamination by vacuuming with a HEPA filtered vacuum cleaner, wet mopping the area and wet wiping the area as indicated by the Lead Compliance Plan. Reclean areas showing dust or debris. After visible dust and debris is removed, wet wipe and HEPA vacuum all surfaces in the controlled area. If adjacent areas become contaminated at any time during the work, clean, visually inspect, and then wipe sample all contaminated areas. The CP shall then certify in writing that the area has been cleaned of lead contamination before clearance testing.

1.3.3.4 Water Quality

Prepare a Water Quality Plan for all job sites where lead-containing or other hazardous paint will be removed, including provisions for halting work if spills or emissions are observed entering into bodies of water or found in areas where storm water runoff could carry the debris into bodies of water or storm sewers. The plan shall also address cleanup and reporting procedures. Conduct operations in such a manner that lead-containing and other hazardous paint debris do not contaminate the water and so that NPDES permits in accordance with EPA regulation 40 CFR 122 are not required for the project. In the event that there are any releases of lead paint debris into the waterways, with reportable quantities of hazardous substances designated pursuant to Section 311 of the Clean Water Act, they shall be reported to the EPA in accordance with 40 CFR 117 and 40 CFR 355. Releases or spills that carry into waterways or storm sewers shall be thoroughly documented. The documentation shall include the time and location of the release, amount of material released, actions taken to clean up the debris, amount of debris recovered, and corrective action taken to avoid a reoccurrence. Releases shall also be reported to the Coast Guard and other state and local authorities as appropriate. If the release is equivalent to 10 pounds or more of lead-containing material in a 24-hour period, it is considered to be a reportable quantity under CERCLA. Comply with 40 CFR 302.

1.3.3.5 Soil Quality

Prepare a Soil Quality Plan for all job sites where lead-containing or other hazardous paint will be removed. The plan shall include provisions for halting the work should soil contamination occur, correcting the deficiencies responsible for the contamination, and provide procedures for removing and replacing contaminated soil. Establish and implement practices and procedures for preventing contamination of the soil from the

removal of lead-containing or other hazardous paints. Unless otherwise directed by the Contracting Officer, soil shall be considered to have been contaminated by the Contractor's operation if an increase in the total lead content of 100 PPM or greater over background levels occurs. For purposes of computing the increase compute the mean background levels and the mean post-removal levels. The 100 PPM criteria is met if the difference between the means is less than 100 PPM plus the 95 percent confidence limit. Soil sampling and testing shall be conducted prior to the beginning of the project and after the project is completed. Interim testing may also be performed in the event the Contractor or Contracting Officer wants to confirm that the containment system and work practices continue to provide satisfactory protection of the soil. Unless otherwise directed by the Contracting Officer, the following minimum test locations shall be selected for soil analysis. Two locations shall be selected beneath or immediately adjacent to the structure being prepared, and additional samples shall be taken within 100 feet in each direction of the project (i.e., N, S, E, W) in which soil is present. The number of soil sample locations shall be sufficient to adequately characterize the soil contaminant levels within and around the project area. Five composite samples shall be collected at each location. Each of the five samples shall be comprised of five individual plugs of soil combined in a single bag. The composite samples at each location shall be collected using the following procedure:

- a. Place a 1-square foot template at each location.
- b. Remove a sample of soil 3/4 inch in diameter and 1/2 inch in depth at the center of the template and at each of the four corners. Place the five soil plugs into a single bag. This represents one of the three samples to be removed at a given location.
- c. Move the template 1 inch in any direction and repeat the process to collect the second sample. Place all plugs in a separate bag. Move the template 1 inch farther to collect the third sample.
- d. Identify each sample bag with the date, specific location of the sample, name and signature of the sampling technician, and complete chain of custody records.
- e. It is critical that the specific location of each sample be thoroughly measured and documented as the final project testing (and any interim testing) shall be sampled in the precise locations.

Three samples collected at each location shall be analyzed. One of the remaining two samples shall be maintained by the Contractor for the duration of the project and the other by the Contracting Officer in the event reanalysis is required. Lead-containing samples shall be analyzed in accordance with EPA testing guidance as published in 40 CFR 261, App III, by a laboratory listed by the American Industrial Hygiene Association (AIHA) as being proficient in conducting the test. Note that if it is determined that contamination of the soil has occurred as a result of the paint removal operations, TCLP testing will be employed to determine if the soil shall be handled and disposed of as a hazardous waste. The initial sampling of the soil for total lead content does not establish whether the soil would be considered hazardous by TCLP testing. As a result, at the Contractor's option, additional prework soil samples may be removed (minimum of 105 grams is required for a single test at each site) to conduct TCLP testing to establish whether the soil would be classified as hazardous prior to project startup. In the event that there is a release of lead paint debris onto the soil and if the release is 10 pounds or more

of lead-containing material in a 24-hour period, it is considered to be a reportable quantity under CERCLA. Comply with 40 CFR 302. Thoroughly document the occurrence of any spills of lead debris into the soil. The documentation shall include the time and location of the release, amount of material released, actions taken to clean up the debris, amount of debris reclaimed, and corrective action taken to avoid a reoccurrence. Provide the documentation to the Contracting Officer and include the Soil Quality Test Report with results of the prework and post work soil quality tests.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

- Safety, Health, and Environmental Requirements; G, DO
- Safety Plan; G, RO
- Confined Spaces Plan; G, DO
- Respiratory Protection Plan; G, DO
- Airborne Sampling Plan; G, DO
- Ventilation Assessment Plan; G, DO
- Medical Surveillance Plan; G, DO
- Worker Protection Plan; G, DO
- Environmental Protection Plan; G, DO
- Waste Manifest; G, RO
- Waste Disposal Plan; G, DO
- Containment Plan; G, DO
- Water Quality Plan; G, DO
- Soil Quality Plan; G, DO
- Lead Compliance Plan; G, DO

SD-03 Product Data

- Manufacturer's Product Data Sheet; G, DO

SD-04 Samples

- Paint Products; G, DO

SD-06 Test Reports

- Soil Quality Test Report; G, DO
- Inspection Reports; G, DO
- Medical Status Report; G, DO
- Change in Medical Status Report; G, DO
- Air Monitoring Test Plan; G, RO
- Air Monitoring Test Report; G, DO

SD-07 Certificates

- Certified EHS Professional; G, DO
- Certified Lead Laboratory; G, DO; G, DO
- SSPC QP 1 Certificate; G, DO
- SSPC QP 2 Certificate; G, DO
- Qualified Hazardous Paint Removal Contractor; G, DO

Coating Thickness Gage Qualification; G, DO
Qualified Paint Applicator; G, DO

1.5 QUALIFICATIONS

Qualifications and experience shall comply with the following.

1.5.1 Certified Environmental, Health, and Safety (EHS) Professionals

Provide a certificate for each Certified EHS Professional; submit qualifications and experience of qualified and competent persons employed to provide preconstruction and onsite environmental, safety, and health services. Obtain acceptance of this submission prior to the submission of other required environmental, safety, and health submittal items. Utilize a qualified and competent person as defined in Section 01 of EM 385-1-1 to develop the required safety and health submittal and to provide onsite safety and health services during the contract period. The person shall be a Certified Industrial Hygienist (CIH), an Industrial Hygienist (IH), or a Certified Safety Professional (CSP) with a minimum of 3 years of demonstrated experience in similar related work. The CIH, IH, or CSP may utilize other qualified and competent persons, as defined in EM 385-1-1, to conduct on-site safety and health activities as long as these persons have a minimum of 2 years of demonstrated experience in similar related work and are under the direct supervision of the CIH, IH, or CSP. For lead containing jobsites, the competent and qualified person shall have successfully completed an EPA or state accredited lead-based paint abatement Supervisor course specific to the work to be performed and shall possess current and valid state and/or local government certification, as required.

1.5.2 Certified Lead Laboratory

Provide documentation which includes the name, address, and telephone number of the laboratories to be providing services. In addition, the documentation shall indicate that each laboratory is an EPA National Lead Laboratory Accreditation Program (NLLAP) accredited laboratory and that each is rated proficient in the NIOSH/EPA Environmental Lead Proficiency Analytical Testing Program (ELPAT) and will document the date of current accreditation. Certification shall include accreditation for heavy metal analysis, list of experience relevant to analysis of lead in air, and a Quality Assurance and Quality Control Program. Submit a certificate for the Certified Lead Laboratory.

1.5.3 Qualified Painting Contractor

Provide a certified SSPC QP 1 Painting Contractor. Submit a copy of the SSPC QP 1 Certificate. Expiration of pre-qualification must not expire before the project completion date.

1.5.4 Qualified Hazardous Paint Removal Contractor

Provide a certified SSPC QP 2 Painting Contractor. Provide a copy of the SSPC QP 2 Certificate. Expiration must not expire before project completion date.

1.5.5 Qualified Paint Applicator

Submit records of qualification tests for each Qualified Paint Applicator. Prior to the initiation of any work all coating applicators must be tested

and certified as meeting the requirements of ASTM D4228. Certification must be administered by an authorized government representative. Applicators failing the certification procedure will not be permitted to apply any paint on the project. The contractor is responsible for providing the test panel for the test and test panel shall conform to Figure 1 of ASTM D4228.

1.5.6 Coating Thickness Gage Qualification

Submit Coating Thickness Gage Qualification documentation of manufacturer's certification for all coating thickness gages. Magnetic flux thickness gages as described in ASTM D7091 shall be used to make all coating thickness measurements on ferrous metal substrates. Eddy current thickness gages as described in ASTM D7091 shall be used to measure coating thickness on all nonferrous metal substrates. Gages shall have an accuracy of +/- 3 percent or better. Gages to be used on the job shall be certified by the manufacturer as meeting these requirements.

1.6 DELIVERY, STORAGE, AND HANDLING

Process and package paints to ensure that within a period of one year from date of manufacture, they will not gel, liver, or thicken deleteriously, or form gas in the closed container. Paints, unless otherwise specified or permitted, shall be packaged in standard containers not larger than 5 gal, with removable friction or lug-type covers. Containers for vinyl-type paints shall be lined with a coating resistant to solvents in the formulations and capable of effectively isolating the paint from contact with the metal container. Each container of paint or separately packaged component thereof shall be labeled to indicate the purchaser's order number, date of manufacture, manufacturer's batch number, quantity, color, component identification and designated name, and formula or specification number of the paint together with special labeling instructions, when specified. Paint shall be delivered to the job in unbroken containers. Paints that can be harmed by exposure to cold weather shall be stored in ventilated, heated shelters. All paints shall be stored under cover from the elements and in locations free from sparks and flames.

1.7 AMBIENT CONDITIONS

Paint shall be applied only to surfaces that are at least 5 degrees above the dew point temperature and that are completely free of moisture as determined by sight and touch. Paint shall not be applied to surfaces upon which there is detectable frost or ice. Except as otherwise specified, the temperature of the surfaces to be painted and of air in contact therewith shall be not less than 45 degrees F during paint application nor shall paint be applied if the surfaces can be expected to drop to 32 degrees F or lower before the film has dried to a reasonably firm condition. During periods of inclement weather, painting may be continued by enclosing the surfaces and applying artificial heat via indirect heat, provided the minimum temperatures and surface dryness requirements prescribed previously are maintained. DO NOT USE PROPANE DIRECT FIRE HEATERS in enclosure as the burning of propane emits water vapor in the enclosed air and eventually on bridge affecting surface dryness requirements. Paint shall not be applied to surfaces heated by direct sunlight or other sources to temperatures that will cause detrimental blistering, pinholing, or porosity of the film.

PART 2 PRODUCTS

Submit Manufacturer's Product Data Sheet for the type of paint used and other written instructions for those products.

2.1 PAINT PRODUCTS

Special paints shall have the composition as indicated in the formulas listed herein. Where so specified, certain components of a paint formulation shall be packaged in separate containers for mixing on the job. The Contractor must choose a vinyl System No. 3-A-Z.

2.2 PAINT FORMULATIONS

Special paint formulas shall comply with the following:

2.2.1 Formula V-102e

This formula is for Vinyl-Type Ready-Mixed Aluminum Impacted Immersion Coating, the ingredients are shown below.

INGREDIENTS	PERCENT BY MASS
Vinyl Resin, Type 3	18.2
Aluminum Powder	8.3
Diisodecyl Phthalate	3.1
Methyl Isobutyl Ketone	33.8
Toluene	36.6
Total	100.0

- a. The paint shall be furnished with the aluminum pigment mixed into the vehicle.
- b. The viscosity of the paint shall be between 60 and 90 seconds using ASTM D1200 and a No. 4 Ford cup. The paint shall show the proper proportions of specified materials when analyzed by chromatographic and/or spectrophotometric methods.

2.2.2 Formula V-766e

This formula is for Vinyl-Type White (or Gray) Impacted Immersion Coating, the ingredients are shown below.

INGREDIENTS	PERCENT BY MASS
Vinyl Resin, Type 3	5.6
Vinyl Resin, Type 4	11.6
Titanium Dioxide and (for Gray) Carbon Black	13.0

INGREDIENTS	PERCENT BY MASS
Diisodecyl Phthalate	2.9
Methyl Isobutyl Ketone	32.0
Toluene	34.7
Ortho-Phosphoric Acid	0.2
Total	100.0

- a. The dispersion of pigment shall be accomplished by means of pebble mills or other approved methods to produce a fineness of grind (ASTM D1210) of not less than 7 on the Hegman scale. Grinding in steel-lined or steel-ball mills will not be permitted. No grinding aids, antissettling agents, or any other materials except those shown in the formula will be permitted. The paint shall show the proper proportions of specified materials when analyzed by chromatographic and/or spectrophotometric methods. The ortho-phosphoric acid shall be measured accurately and diluted with at least four parts of ketone to one part of acid and it shall be slowly incorporated into the finished paint with constant and thorough agitation.
- b. The viscosity of the paint shall be between 60 and 90 seconds using ASTM D1200 and a No. 4 Ford cup.
- c. The white and gray paints shall be furnished in the volume ratio designated by the purchaser. The gray paint shall contain no pigments other than those specified. Enough carbon black shall be included to produce a dry paint film having a reflectance of 20-24 (ASTM E1347). The resulting gray color shall approximate color 26231 of FED-STD-595.

2.2.3 Formula VZ-108d

This formula is for Vinyl-Type Zinc-Rich Impacted Immersion Coating, the ingredients are shown below.

INGREDIENTS	PERCENT BY WEIGHT	POUNDS	GALLONS
COMPONENT A			
Vinyl Resin, Type 3	16.6	109.2	9.65
Methyl Isobutyl Ketone	80.6	528.9	79.30
Suspending Agent E	0.7	4.6	0.28
Suspending Agent F	0.4	2.7	0.19
Methanol	0.5	3.3	0.50
Synthetic Iron Oxide (Red)	1.2	7.9	0.19
Total	100.0	656.6	90.11

INGREDIENTS	PERCENT BY WEIGHT	POUNDS	GALLONS
COMPONENT B			
Silane B	100.0	4.1	0.47
COMPONENT C			
Zinc Dust	100.0	550.0	9.42
Total Volume			100.00 (mixed paint)

- a. The iron oxide and suspending agents shall be dispersed into the vehicle (Component A) to a fineness of grind of not less than 4 on the Hegman scale (ASTM D1210). Grinding in steel-lined containers or using steel-grinding media shall not be permitted. The paint shall show the proper proportions of specified materials when analyzed by chromatographic and/or spectrophotometric methods. The sole purpose of the iron oxide pigment is to produce a contrasting color. A red iron oxide-type 3 vinyl resin vehicle paste may be used in place of dry iron oxide provided compensating adjustment are made in the additions of Type 3 resin and methyl isobutyl ketone. The finished product with zinc dust added shall produce a paint which has a red tone upon drying and a reflectance of not more than 16 (ASTM E1347).

- b. VZ-108d paint shall be supplied as a kit. Each kit shall consist of 4.5 gal (33.1 pounds) of Component A in a 5-gallon lug closure type pail, 27.5 pounds of zinc dust (Component C) packaged in a 1-gal plastic pail, and 3 fluid ounces of silane (Component B) packaged in a glass bottle of suitable size having a polyethylene lined cap. The bottle of silane shall be placed on the zinc dust in the 1-gal pail. In addition to standard labeling requirements, each container of each component shall be properly identified as to component type and each container label of Component A shall carry the following: MIXING AND APPLICATION INSTRUCTIONS: WARNING - THIS PAINT WILL NOT ADHERE TO STEEL SURFACES UNLESS COMPONENT B IS ADDED. Remove the 3 ounces of bottled Component B (silane) from the Component C (zinc dust) container and add to the base paint (Component A) with thorough stirring. Then sift the zinc dust into the base paint while it is being vigorously agitated with a power-driven stirrer and continue the stirring until the zinc dust has been dispersed. The mixed paint shall at some point be strained through a 30-60 mesh screen to prevent zinc dust slugs from reaching the spray gun nozzle. The paint shall be stirred continuously during application at a rate that will prevent settling. If spraying is interrupted for longer than 15 minutes, the entire length of the hose shall be whipped vigorously to redisperse the zinc. If the spraying is to be interrupted for more than 1 hour, the hose shall be emptied by blowing the paint back into the paint pot. Thinning will not normally be required when ambient temperatures are below about 80 degrees F, but when the ambient and steel temperatures are higher, methyl isoamyl ketone (MIAK) or methyl isobutyl ketone (MIBK) should be used. If paint is kept covered at all times, its pot life will be about 8 days.

2.3 INGREDIENTS FOR PAINT

The following ingredient materials and thinners apply only to those special paints whose formulas are shown above in detail.

2.3.1 Pigments and Suspending Agents

2.3.1.1 Aluminum Powder

For vinyl paint aluminum powder shall conform to ASTM D962, Type 1, Class B.

2.3.1.2 Carbon Black

Carbon black shall conform to ASTM D561, Type I or II.

2.3.1.3 Zinc Dust

Zinc dust pigment shall conform to ASTM D520, Type II and contain no toxic heavy metals.

2.3.1.4 Iron Oxide

Iron oxide, (Dry) synthetic (red), shall conform to ASTM D3721. In addition, the pigment shall have a maximum oil absorption of 24 and a specific gravity of 4.90 to 5.20 when tested in accordance with ASTM D281 and ASTM D153, Method A, respectively. When the pigment is dispersed into specified vinyl paint formulation, the paint shall have color approximating FED-STD-595 color 10076 (dark red paint), and shall show no evidence of incompatibility or reaction between pigment and other components after 6 months storage.

2.3.1.5 Titanium Dioxide

Titanium dioxide in vinyl paint Formula V-766e shall be one of the following: Kronos 2160 or 2101, Kronos, Inc.; Ti-Pure R-960, E.I. Dupont DeNemours and Co., Inc.

2.3.1.6 Suspending Agent E

Suspending Agent E shall be a light cream colored finely divided powder having a specific gravity of 2 to 2.3. It shall be an organic derivative of magnesium aluminum silicate mineral capable of minimizing the tendency of zinc dust to settle hard without increasing the viscosity of the paint appreciably. M-P-A-14, produced by Elementis Specialties, has these properties.

2.3.1.7 Suspending Agent F

Suspending Agent F shall be a light cream colored finely divided powder having a specific gravity of approximately 1.8. It shall be an organic derivative of a special montmorillonite (trialkylaryl ammonium hectorite). Bentone 27, produced by Elementis Specialties, has these properties.

2.3.2 Resins, Plasticizer, and Catalyst

2.3.2.1 Diisodecyl Phthalate

Diisodecyl Phthalate (DIDP) shall have a purity of not less than 99.0

percent, shall contain not more than 0.1 percent water, and shall have an acid number (ASTM D1045) of not more than 0.10.

2.3.2.2 Vinyl Resin, Type 3

Vinyl resin, Type 3, shall be a vinyl chloride-acetate copolymer of medium average molecular weight produced by a solution polymerization process and shall contain 85 \pm 1.0 percent vinyl chloride and 15 \pm 1.0 percent vinyl acetate by weight. The resin shall have film-forming properties and shall, in specified formulations, produce results equal to Vinnol H 15/50, as manufactured by Wacker Chemie AG.

2.3.2.3 Vinyl Resin, Type 4

Vinyl resin, Type 4, shall be a copolymer of the vinyl chloride-acetate type produced by a solution polymerization process, shall contain (by weight) 1 percent interpolymerized dicarbonic acid, 84 \pm 1.0 percent vinyl chloride, and 15 \pm 1.0 percent vinyl acetate. The resin shall have film-forming properties and shall, in the specified formulations, produce results equal to Vinnol H 15/45 M, as manufactured by Wacker Chemie AG.

2.3.2.4 Ortho-phosphoric Acid

Ortho-phosphoric acid shall be a chemically pure 85-percent grade.

2.3.3 Solvent and Thinners

2.3.3.1 Methanol

Methanol (methyl alcohol) shall conform to ASTM D1152.

2.3.3.2 Methyl Ethyl Ketone

Methyl ethyl ketone (MEK) shall conform to ASTM D740.

2.3.3.3 Methyl Isobutyl Ketone

Methyl isobutyl ketone (MIBK) shall conform to ASTM D1153.

2.3.3.4 Methyl Isoamyl Ketone

Methyl isoamyl ketone (MIAK) shall conform to ASTM D2917.

2.3.3.5 Toluene

Toluene shall conform to ASTM D841.

2.3.4 Silane B

Silane B for Formula VZ-108d shall be N-beta-(aminoethyl)-gamma-aminopropyltrimethoxy silane. Silquest A-1120, produced by Momentive Performance Materials Inc., and Silane Z-6020, produced by Dow Corning Corporation, are products of this type.

2.4 TESTING

2.4.1 Chromatographic Analysis

Solvents in vinyl paints and thinners shall be subject to analysis by

programmed temperature gas chromatographic methods and/or spectrophotometric methods, employing the same techniques that give reproducible results on prepared control samples known to meet the specifications. If the solvent being analyzed is of the type consisting primarily of a single chemical compound or a mixture of two or more such solvents, interpretation of the test results shall take cognizance of the degree of purity of the individual solvents as commercially produced for the paint industry.

2.4.2 Vinyl Paints

Vinyl paints shall be subject to the following adhesion test. When V-766 formulation is tested, 5 to 7 mils (dry) shall be spray applied to mild steel panels. The steel panels shall be essentially free of oil or other contaminants that may interfere with coating adhesion. The test panels shall be dry blast cleaned to a White Metal grade which shall be in compliance with SSPC SP 5/NACE No. 1. The surface shall have an angular profile of 2.0 to 2.5 mils as measured by ASTM D4417, Method C. When V-102 formulation is tested, it shall be spray applied over 1.5 to 2.5 mils (dry) of V-766 known to pass this test. When VZ-108 is tested, the coating shall be mixed in its proper proportions and then spray applied to a dry film thickness of 1.5 to 2.5 mils above the blast profile. The VZ-108 shall be top coated with a V-766 known to pass this test. In all cases, the complete system shall have a total dry film thickness of 5 to 7 mils above the blast profile. After being air dried for 2 hours at room temperature, the panel shall be dried in a vertical position for 16 hours at 120 degrees F. After cooling for 1 hour, the panel shall be immersed in tap water at 85 to 90 degrees F for 48 to 72 hours. Immediately upon removal, the panel shall be dried with soft cloth and examined for adhesion as follows: With a pocket knife or other suitable instrument, two parallel cuts at least 1 inch long shall be made 1/4 to 3/8 inch apart through the paint film to the steel surface. A third cut shall be made perpendicular to and passing through the end of the first two. With the tip of the knife blade, the film shall be loosened from the panel from the third cut between the parallel cuts for a distance of 1/8 to 1/4 inch. With the panel being held horizontally, the free end of the paint film shall be grasped between the thumb and forefinger and pulled vertically in an attempt to remove the film as a strip from between the first two cuts. The strip of paint film shall be removed at a rate of approximately 1/10 inch per second and shall be maintained in a vertical position during the process of removal. The adhesion is acceptable if the strip of paint breaks when pulled or if the strip elongates a minimum of 10 percent during its removal. Paints not intended to be self-priming shall exhibit no delamination from the primer.

PART 3 EXECUTION

3.1 Lead Work

Perform lead work in accordance with approved Lead Compliance Plan. Use procedures and equipment required to limit occupational exposure and environmental contamination with lead when the work is performed in accordance with 29 CFR 1926.62, and as specified herein. Dispose of all PWL or MCL and associated waste in compliance with federal, State and local requirements.

3.2 CLEANING AND PREPARATION OF SURFACES TO BE PAINTED

3.2.1 General Requirements

Clean surfaces to be painted before applying paint or surface treatments. Manual or power sanding or grinding of lead surfaces or materials is not permitted unless tools are equipped with HEPA attachments or wet methods. The dry sanding or grinding of surfaces that contain lead is prohibited. Provide methodology for removing lead in the Lead Compliance Plan. Select lead removal processes to minimize contamination of work areas outside the control area with lead-contaminated dust or other lead-contaminated debris or waste and to ensure that unprotected personnel are not exposed to hazardous concentrations of lead. Describe this removal process in the Lead Compliance Plan. Remove deposits of grease or oil in accordance with SSPC SP 1, prior to mechanical cleaning. Solvent cleaning shall be accomplished with mineral spirits or other low toxicity solvents having a flash point above 100 degrees F. Use clean cloths and clean fluids to avoid leaving a thin film of greasy residue on the surfaces being cleaned. Protect items not to be prepared or coated from damage by the surface preparation methods. Take special care to remove the rust often found along areas with poor drainage, at bolted connections, and at the interface between the top of the steel bent and the bearings. Cleaning and painting shall be so programmed that dust or other contaminants from the cleaning process do not fall on wet, newly painted surfaces, and surfaces not intended to be painted shall be suitably protected from the effects of cleaning and painting operations.

3.2.2 Ferrous Surfaces Subject to Atmospheric Exposures

Ferrous surfaces that are to be continuously in exterior or interior atmospheric exposure and other surfaces as directed shall be cleaned by means of white metal blasting. White metal blast cleaning shall conform to the requirements of SSPC SP 5/NACE No. 1. Welds and adjoining surfaces within a few inches thereof shall be cleaned of weld flux, spatter, and other harmful deposits by blasting, power impact tools, power wire brush, or such combination of these and other methods as may be necessary for complete removal of each type of deposit. The combination of cleaning methods need not include blasting when preparation of the overall surfaces is carried out by the power tool method. However, brush scrubbing and rinsing with clean water, after mechanical cleaning is completed, will be required unless the latter is carried out with thoroughness to remove all soluble alkaline deposits. Wetting of the surfaces during water-washing operations shall be limited to the weld area required to be treated, and such areas shall be dry before painting. Welds and adjacent surfaces cleaned thoroughly by blasting alone will be considered adequately prepared provided that weld spatter not dislodged by the blast stream shall be removed with impact or grinding tools. All surfaces shall be primed as soon as practicable after cleaning and in all cases within 8 hours of cleaning.

3.3 PAINT SYSTEMS APPLICATION

3.3.1 General

The finished coating shall be free from holidays, pinholes, bubbles, runs, drops, ridges, waves, laps, excessive or unsightly brush marks, and variations in color, texture, and gloss. Application of initial or subsequent coatings shall not commence until the Contracting Officer has verified that atmospheric conditions and the surfaces to be coated are

satisfactory. Each paint coat shall be applied in a manner that will produce an even, continuous film of uniform thickness. After the prime coat is dry, a thorough spray of clean water a minimum of 24 hours before the finish coat is applied. Organic zinc paint does not require a water spray. Edges, corners, crevices, seams, joints, welds, rivets, corrosion pits, and other surface irregularities shall receive special attention to ensure that they receive an adequate thickness of paint. Spray equipment shall be equipped with traps and separators and where appropriate, mechanical agitators, pressure gauges, pressure regulators, and screens or filters. Air caps, nozzles, and needles shall be as recommended by the spray equipment manufacturer for the material being applied. Airless-type equipment shall not be used for the application of vinyl paints.

3.3.2 Mixing and Thinning

Paints shall be thoroughly mixed, strained where necessary, and kept at a uniform composition and consistency during application. Dry-powder pigments specified to be added at the time of use shall, with the aid of powered stirrers, be incorporated into the vehicle or base paint in a manner that will produce a smooth, homogeneous mixture free of lumps and dry particles. If multi-component inorganic zinc primer is used, follow the manufacturer's instructions regarding the amount and manner of adding the zinc dust to the liquid portion. Strain the mixed paint through a metal screen having a mesh recommended by the manufacturer. Mix multi-component inorganic zinc paint fresh each day and do not use it past the pot life time stated in the manufacturer's literature. Where necessary to suit conditions of the surface temperature, weather, and method of application, the paint may be thinned, but only as recommended by the manufacturer. If thinner is used, add it to the paint during the mixing process. Do not add additional thinner after the paint is thinned to the proper consistency. Use thinner recommended by the manufacturer for inorganic zinc paints. Paint that has deteriorated in any manner to a degree that it cannot be restored to essentially its original condition by customary field-mixing methods shall not be used and shall be removed from the project site. Paint and thinner that is more than 1 year old shall be resampled and resubmitted for testing to determine its suitability for application. Moisture cure urethane paint shall be resampled and resubmitted for testing to determine its suitability for application whenever the paint is more than six months old as indicated by the date of manufacture on the container.

3.3.3 Time Between Surface Preparation and Painting

Surfaces that have been cleaned and/or otherwise prepared for painting shall be primed as soon as practicable after such preparation has been completed but, in any event, prior to any deterioration of the prepared surface.

3.3.4 Method of Paint Application

Unless otherwise specified, paint shall be applied by brush, roller, or spray to ferrous and nonferrous metal surfaces and in accordance with the manufacturer's instructions. Special attention shall be directed toward ensuring adequate coverage of edges, corners, crevices, pits, rivets, bolts, welds, and similar surface irregularities. Spray painting may be used as approved by the COR in those places where it is not possible to blast clean. Clean these areas by hand as well as possible, and apply a heavy coat of organic zinc primer with a brush or dauber. Other methods of application to metal surfaces shall be subject to the specific approval of

the Contracting Officer.

3.3.5 Coverage and Film Thickness

Apply the prime coat with 3 to 6 mils dry film thickness of the prime coat on flat areas. More thickness will be allowed in fillet areas if there is no evidence of mud cracking, and if the coating is tight. Apply 1 finish coat with 3 to 6 mils dry film thickness on flat areas. A thickness in excess of 6 mils is allowed in fillet areas if there is no evidence of mud cracking, and if the coating is tight. Where no spreading rate is specified, the paint shall be applied at a rate consistent with the manufacturer's written instructions. In any event, the combined coats of a specified paint system shall completely hide base surface and the finish coats shall completely hide undercoats of dissimilar color.

3.3.5.1 Measurement on Ferrous Metal

Where dry film thickness requirements are specified for coatings on ferrous surfaces, measurements shall be made with a gage qualified in accordance with paragraph Coating Thickness Gage Qualification. They shall be calibrated and used in accordance with ASTM D7091. Prior to each use the Base Metal Reading (BMR) shall be established for the gage as specified in the test method. Accuracy of the gage shall be verified using plastic shims as specified by the test method both prior to and following each set of measurements. Frequency of measurements shall be as recommended for field measurements by ASTM D7091, except that measurements shall be performed on all areas of the structure being coated. Thickness measurements shall be reported as the mean for each spot determination.

3.3.6 Progress of Painting Work

Where field painting on any type of surface has commenced, the complete painting operation, including priming and finishing coats, on that portion of the work shall be completed as soon as practicable, without prolonged delays. Sufficient time shall elapse between successive coats to permit them to dry properly for recoating, and this period shall be modified as necessary to suit adverse weather conditions. Paint shall be considered dry for recoating when it feels firm, does not deform or feel sticky under moderate pressure of the finger, and the application of another coat of paint does not cause film irregularities such as lifting or loss of adhesion of the undercoat. All coats of all painted surfaces shall be unscarred and completely integral at the time of application of succeeding coats. At the time of application of each successive coat, undercoats shall be cleaned of dust, grease, overspray, or foreign matter by means of airblast, solvent cleaning, or other suitable means. Cement and mortar deposits on painted steel surfaces, not satisfactorily removed by ordinary cleaning methods, shall be brush-off blast cleaned and completely repainted as required. Undercoats of high gloss shall, if necessary for establishment of good adhesion, be scuff sanded, solvent wiped, or otherwise treated prior to application of a succeeding coat. Field coats on metal shall be applied after erection except as otherwise specified and except for surfaces to be painted that will become inaccessible after erection.

3.3.7 Contacting Surfaces

When riveted or ordinary bolted contact is to exist between surfaces of ferrous or other metal parts of substantially similar chemical composition, such surfaces will not be required to be painted, but any resulting

crevices shall subsequently be filled or sealed with paint. Where a nonmetal surface is to be in riveted or bolted contact with a metal surface, the contacting surfaces of the metal shall be cleaned and given three coats of the specified primer.

3.3.8 Protection of Painted Surfaces

Where shelter and/or heat are provided for painted surfaces during inclement weather, such protective measures shall be maintained until the paint film has dried and discontinuance of the measures is authorized. Items that have been painted shall not be handled, worked on, or otherwise disturbed until the paint coat is fully dry and hard. All metalwork coated in the shop or field prior to final erection shall be stored out of contact with the ground in a manner and location that will minimize the formation of water-holding pockets; soiling, contamination, and deterioration of the paint film, and damaged areas of paint on such metalwork shall be cleaned and touched up without delay.

3.3.9 Vinyl Paints

3.3.9.1 General

Vinyl paints shall be spray applied, except that areas inaccessible to spraying shall be brushed. All of the vinyl paints require thinning for spray application except the zinc-rich vinyl paint (Formula VZ 108d) which will normally require thinning only under certain weather conditions. Thinners for vinyl paints shall be as follows:

APPROXIMATE AMBIENT AIR TEMPERATURE (Degrees F)	
Below 50	MEK
50 - 70	MIBK
Above 70	MIAK

The amount of thinner shall be varied to provide a wet spray and avoid deposition of particles that are semidry when they strike the surface. Vinyl paints shall not be applied when the temperature of the ambient air and receiving surfaces is less than 35 degrees F nor when the receiving surfaces are higher than 125 degrees F. Each spray coat of vinyl paint shall consist of a preliminary extra spray pass on edges, corners, interior angles, pits, seams, crevices, junctions of joining members, rivets, weld lines, and similar surface irregularities followed by an overall double spray coat. A double spray coat of vinyl-type paint shall consist of applying paint to a working area of not less than several hundred square feet (meters) in a single, half-lapped pass, followed after drying to at least a near tack-free condition by another spray pass applied at the same coverage rate and where practicable at right angles to the first. Rivets, bolts, and similar surface projections shall receive sprayed paint from every direction to ensure complete coverage of all faces. Pits, cracks, and crevices shall be filled with paint insofar as practicable, but in any event, all pit surfaces shall be thoroughly covered and all cracks and crevices shall be sealed off against the entrance of moisture. Fluid and atomization pressures shall be kept as low as practicable consistent with good spraying results. Unless otherwise specified, not more than 2.0 mils, average dry film thickness, of vinyl paint shall be applied per double spray coat. Except where otherwise indicated, an undercoat of the

vinyl-type paint may receive the next coat any time after the undercoat is tack-free and firm to the touch, provided that no speedup or delay in the recoating schedule shall cause film defects such as sags, runs, air bubbles, air craters, or poor intercoat adhesion. Neither the prime coat nor any other coat shall be walked upon or be subjected to any other abrading action until it has hardened sufficiently to resist mechanical damage.

3.3.9.2 Vinyl Zinc-Rich Primer

Primer shall be field mixed combining components A, B, and C. Mixing shall be in accordance with label instructions. After mixing, the paint shall be kept covered at all times to avoid contamination and shall be applied within 8 days after it is mixed. When the ambient and/or steel temperature is below about 80 degrees F, the paint will not normally require thinning; however, the paint shall at all times contain sufficient volatiles (thinners) to permit it to be satisfactorily atomized and to provide a wet spray and to avoid deposition of particles that are semidry when they reach the surface. The paint shall be stirred continuously during application at a rate that will prevent the zinc dust from settling. When spraying is resumed after any interruption of longer than 15 minutes, the entire length of the material hose shall be whipped vigorously until any settled zinc is redispersed. Long periods of permitting the paint to remain stagnant in the hose shall be avoided by emptying the hoses whenever the painting operation is to be suspended for more than 1 hour. The material (paint) hoses shall be kept as short as practicable, preferably not more than 50 feet in length. Equipment used for spraying this zinc primer shall not be used for spraying other vinyl-type paints without first being thoroughly cleaned, since many of the other paints will not tolerate zinc contamination; no type of hot spray shall be used. An average dry film thickness of up to 2.5 mils may be applied in one double-spray coat. Unless specifically authorized, not more than 8 days shall elapse after application of a VZ-108d zinc-rich coat before it receives a succeeding coat.

3.3.9.3 Vinyl Paints

Vinyl Paints (Formulas V-102e and V-766e) are ready-mixed paints designed to be spray applied over a wide range of ambient temperatures by field thinning with the proper type and amount of thinner. For spray application, they shall be thinned as necessary up to approximately 25 percent (1 quart/gallon of base paint) with the appropriate thinner; when ambient and steel temperatures are above normal, up to 40-percent thinning may be necessary for satisfactory application.

3.4 PAINT SYSTEMS APPLICATION

The required paint systems and the surfaces to which they shall be applied are shown in this paragraph, and/or in the drawings. Supplementary information follows.

3.4.1 Surface Preparation

The method of surface preparation and pretreatment shown in the tabulation of paint systems is for identification purposes only. Cleaning and pretreatment of surfaces prior to painting shall be accomplished in accordance with detailed requirements previously described.

3.4.2 System No. 3-A-Z

Paint shall be spray applied to an average dry film thickness of a minimum of 6.5 mils for the completed system, and the thickness at any point shall not be less than 5.5 mils. The dry film thickness of the zinc-rich coat shall be approximately 2.5 mils. Specified film thickness, including the prescribed total, shall be attained in any event, and any extra coats needed to attain specified thickness shall be applied at no additional cost to the Government. Attaining of the specified film thickness in fewer than the prescribed number of coats or spray passes will be acceptable provided heavier applications do not cause an increase in pinholes, bubbles, blisters, or voids in the dried film and also provided that not more than 2.0 mils (dry film thickness) per double spray coat nor more than 1.0 mil per single spray pass of nonzinc paint shall be applied at one time.

3.5 INSPECTION

Inspect and document all work phases and operations on a daily basis. Submit daily Inspection Reports. As a minimum the daily report shall contain the following:

- a. Inspections performed, including the area of the structure involved and the results of the inspection.
- b. Surface preparation operations performed, including the area of the structure involved, the mode of preparation, the kinds of solvent, abrasive, or power tools employed, and whether contract requirements were met.
- c. Thinning operations performed, including thinners used, batch numbers, and thinner/paint volume ratios.
- d. Application operations performed, including the area of the structure involved, mode of application employed, ambient temperature, substrate temperature, dew point, relative humidity, type of paint with batch numbers, elapsed time between surface preparation and application, elapsed time for recoat, condition of underlying coat, number of coats applied, and if specified, measured dry film thickness or spreading rate of each new coating.

3.6 PAINTING SCHEDULES

SYSTEM NO. 3-A-Z				
Items or surfaces to be coated:		Bridge (metal surfaces)		
SURFACE PREPARATION	1st COAT	2nd COAT	3rd COAT	4th COAT
White metal blast cleaning	Vinyl zinc-rich VZZ-108d (double spray coat)	White Vinyl V-766e (double spray coat)	Aluminum Vinyl V-102e (double spray coat)	Aluminum Vinyl V-102e (as needed to obtain the required thickness)

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Smoky Hill, KS

W912DQ23B1002

-- End of Section --