US Army Corps
of Engineers ®
Portland District

SOLICITATION
W9127N26BA001

John Day Dam
Rufus, Wasco County, Oregon

Fish Pump Rehabilitation

Project Manual

John Day Dam Fish Pump Rehabilitation
Rufus, Wasco County, Oregon

TABLE OF CONTENTS

00 10 00 SOLICITATION, OFFER, AND AWARD FORM (SF 1442)

00 00 00 PROCUREMENT AND CONTRACTING REQUIREMENTS

00 10 00 SOLICITATION

00 21 00 INSTRUCTIONS

00 21 00 SUPPLEMENTARY INSTRUCTIONS

00 45 00 REPRESENTATIONS AND CERTIFICATIONS

00 70 00 CONDITIONS OF THE CONTRACT

00 72 00 GENERAL CONDITIONS

00 73 00 SUPPLEMENTARY CONDITIONS

01 00 00 GENERAL REQUIREMENTS

GENERAL AND TECHNICAL SPECIFICATION REQUIREMENTS

ATTACHMENTS

A1: Submittal Register (ENG Form 4288-R)

A2: Project Sign

A3: Spill Emergency Initial Report Form

A4: Limitations on Subcontracting Form

A5: Wage Rate Requirements (Construction)

A6: Hazardous Energy Control Plan

A7: Sample Redzone Checklist

A8: Construction and Demolition Diversion - Disposal

SOLICITATION, OFFER, AND AWARD

(Construction, Alteration, or Repair)

1. SOLICITATION NUMBER	2. TYPE OF SOLICITATION	3. DATE ISSUED	PAGE OF PAGES
W9127N26BA001	[X] SEALED BID (IFB) INVITATION FOR BID [ ] NEGOTIATED (RFP) REQUEST FOR PROPOSAL	07 APR 2026	1 116

IMPORTANT - The "offer" section on the reverse must be fully completed by offeror.

4. CONTRACT NUMBER	5. REQUISITION/PURCHASE REQUEST NUMBER	6. PROJECT NUMBER
		513664

7. ISSUED BY	CODE	8. ADDRESS OFFER TO
W071 ENDIST PORTLAND KO CONTRACTING DIVISION, 333 SW FIRST AVE PORTLAND, OR 97204-3495 UNITED STATES KRISTEL FLORES, EMAIL: KRISTEL.M.FLORES@USACE.ARMY.MIL TELEPHONE: (503) 808-4664	W9127N	

9. FOR INFORMATION CALL:	a. NAME	b. TELEPHONE NUMBER *(Include area code) (NO COLLECT CALLS)*
	KRISTEL FLORES	(503) 808-4664

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 number, date)*

PROJECT TITLE: JOHN DAY FISH PUMP REHABILITATION
PROJECT LOCATION: JOHN DAY LOCK AND DAM, RUFUS, OR

DESCRIPTION: REMOVAL, REFURBISHMENT, AND REPLACEMENT OF MAJOR COMPONENTS OF FISH PUMP UNITS 1 AND 2, INCLUDING BUT NOT LIMITED TO SHAFTS, BEARINGS, BEARING BRACKETS, AND RIGHT-ANGLE DRIVE GEARBOXES.

MAGNITUDE OF CONSTRUCTION: BETWEEN $1,000,000 AND $5,000,000

NAICS: 237990 OTHER HEAVY AND CIVIL ENGINEERING CONSTRUCTION
SIZE STANDARD: $45,000,000

SOCIO-ECONOMIC CONSIDERATIONS: TOTAL SMALL BUSINESS SET-ASIDE

11. The contractor shall begin performance within 10 calendar days and complete it within 965 calendar days after receiving

[ ] award, [X] notice to proceed. This performance period is [X] mandatory [ ] negotiable. ***(See*** 00 73 00 ***).***

12a. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE AND PAYMENT BONDS? *(If "YES", indicate within how many calendar days after award in Item 12b.)*	12b. CALENDAR DAYS
[X] YES [ ] NO	10

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 01:00 PM ***(hour)*** local time 08 MAY 2026 (date). If this is a sealed bid solicitation, offers will 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 [X] 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 120 calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.

OFFER *(Must be fully completed by offeror)*

14. NAME AND ADDRESS OF OFFEROR *(Include ZIP Code)*	15. TELEPHONE NUMBER *(Include area code)*
	16. REMITTANCE ADDRESS *(Include only if different than Item 14.)*
CODE FACILITY CODE	

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 requirement stated in Item 13d. Failure to insert any number means the offeror accepts the minimum in Item 13d.)*

AMOUNTS ▶

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 NUMBER										
DATE										

20a. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER *(Type or print)*	20b. SIGNATURE	20c. OFFER DATE

AWARD *(To be completed by Government)*

21. ITEMS ACCEPTED:

22. AMOUNT	23. ACCOUNTING AND APPROPRIATION DATA
24. SUBMIT INVOICES TO ADDRESS SHOWN IN *(4 copies unless otherwise specified)* ▶ ITEM	25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO THE UNITED STATES CODE AT ☐ 10 U.S.C. 3204(a) ( ) ☐ 41 U.S.C. 3304(a) ( )
26. ADMINISTERED BY	27. PAYMENT WILL BE MADE BY

CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE

☐ 28. NEGOTIATED AGREEMENT *(Contractor is required to sign this document and return _____ copies to issuing office.)* Contractor agrees to furnish and deliver all items or perform all work requirements identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications incorporated by reference in or attached to this contract.	☐ 29. AWARD *(Contractor is not required to sign this document.)* Your offer on this solicitation is hereby accepted as to the items listed. This award consummates the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual document is necessary.
30a. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN *(Type or print)*	31a. NAME OF CONTRACTING OFFICER *(Type or print)*
30b. SIGNATURE / 30c. DATE	31b. UNITED STATES OF AMERICA BY / 31c. DATE

Section 00 00 00 - Procurement and Contracting Requirements

Instrument Name: John Day Fish Pump Rehabilitation

Description: Removal, refurbishment, and replacement of major components of Fish Pump Units 1 and 2, including but not limited to shafts, bearings, bearing brackets, and right-angle drive gearboxes. Magnitude of Construction: Between $1,000,000 and $5,000,000 NAICS: 237990 Other Heavy and Civil Engineering Construction Size Standard: $45,000,000 Socio-Economic Considerations: Total Small Business Set-Aside

Section 00 10 00 - Solicitation, Contract Line Item Number (CLIN) Schedule

Additional Information/Notes

Item	Supplies/Service	Quantity	Unit	Unit Price	Amount
0001	Mobilization and Demobilization (Unit 2) Product Service Code: Z2KA North American Industry Classification System (NAICS): 237990 Pricing Arrangement: Firm Fixed Price	1	Job		
0002	Propeller Rehabilitation (Unit 2) Product Service Code: Z2KA North American Industry Classification System (NAICS): 237990 Pricing Arrangement: Firm Fixed Price	1	Job		
0003	Pump Shaft, Upper and Lower Bearing Parts Install and Rehabilitation (Unit 2) Product Service Code: Z2KA North American Industry Classification System (NAICS): 237990 Pricing Arrangement: Firm Fixed Price	1	Job		
0004	Manufacture and Delivery of New Gearbox (Unit 2) Product Service Code: Z2KA North American Industry Classification System (NAICS): 237990 Pricing Arrangement: Firm Fixed Price	1	Job		
0005	Installation of New Gearbox (Unit 2) Product Service Code: Z2KA North American Industry Classification System (NAICS): 237990 Pricing Arrangement: Firm Fixed Price	1	Job		
0006	Testing and Commissioning (Unit 2)	1	Job		

	Product Service Code: Z2KA North American Industry Classification System (NAICS): 237990 Pricing Arrangement: Firm Fixed Price				
Option Line Item 0007	Mobilization and Demobilization, Unit 1 (Optional) Product Service Code: Z2KA North American Industry Classification System (NAICS): 237990 Pricing Arrangement: Firm Fixed Price	1	Job		
Option Line Item 0008	Propeller Rehabilitation, Unit 1 (Optional) Product Service Code: Z2KA North American Industry Classification System (NAICS): 237990 Pricing Arrangement: Firm Fixed Price	1	Job		
Option Line Item 0009	Pump Shaft, Upper and Lower Bearing Parts Install and Rehabilitation, Unit 1 (Optional) Product Service Code: Z2KA North American Industry Classification System (NAICS): 237990 Pricing Arrangement: Firm Fixed Price	1	Job		
Option Line Item 0010	Manufacture and Delivery of New Gearbox, Unit 1 (Optional) Product Service Code: Z2KA North American Industry Classification System (NAICS): 237990 Pricing Arrangement: Firm Fixed Price	1	Job		
Option Line Item 0011	Installation of New Gearbox, Unit 1 (Optional) Product Service Code: Z2KA North American Industry Classification System (NAICS): 237990 Pricing Arrangement: Firm Fixed Price	1	Job		

Option Line Item 0012	Testing and Commissioning, Unit 1 (Optional) Pricing Arrangement: Firm Fixed Price	1	Job		
Option Line Item 0013	Mobilization and Demobilization, Unit 3 (Optional) Product Service Code: Z2KA North American Industry Classification System (NAICS): 237990 Pricing Arrangement: Firm Fixed Price	1	Job		
Option Line Item 0014	Propeller Rehabilitation, Unit 3 (Optional) Product Service Code: Z2KA North American Industry Classification System (NAICS): 237990 Pricing Arrangement: Firm Fixed Price	1	Job		
Option Line Item 0015	Pump Shaft, Upper and Lower Bearing Parts Install and Rehabilitation, Unit 3 (Optional) Product Service Code: Z2KA North American Industry Classification System (NAICS): 237990 Pricing Arrangement: Firm Fixed Price	1	Job		
Option Line Item 0016	Manufacture and Delivery of New Gearbox, Unit 3 (Optional) Product Service Code: Z2KA North American Industry Classification System (NAICS): 237990 Pricing Arrangement: Firm Fixed Price	1	Job		
Option Line Item 0017	Installation of New Gearbox, Unit 3 (Optional) Product Service Code: Z2KA North American Industry Classification System (NAICS): 237990 Pricing Arrangement: Firm Fixed Price	1	Job		

Option Line Item 0018	Testing and Commissioning, Unit 3 (Optional) Pricing Arrangement: Firm Fixed Price	1	Job		

Section 00 21 00 - Instructions

SUBMISSION REQUIREMENTS

The price proposal shall be submitted via email to Kristel Flores at Kristel.M.Flores@usace.army.mil and Cory Pfenning at Cory.R.Pfenning@usace.army.mil no later than the date and time stated in Block 13 of SF1442 (SUBJECT TO CHANGE). The offeror shall provide pricing and complete all line items on Standard Form 1442 (SF 1442). Your proposal must be prepared in accordance with the below paragraphs and must include:

1. SF1442, Solicitation, Offer. and Award

The SF1442 shall be filled out completely by the offeror and signed by an official that is authorized to bind the company.

The offeror shall also acknowledge all amendments to the solicitation in accordance with the instructions on the Standard Form 30 or Block 19 of SF1442.

2. Section 00 10 00 - Solicitation, Contract Line Item Number (CLIN) Schedule

The offeror shall fully complete the "Unit Price" and "Amount" Columns of this section.

3. In addition to completing 00 10 00 Solicitation, Contract Line Item Number (CLIN) Schedule, the offeror shall submit a summary for each CLIN that separates major cost components, such as labor, materials, permits, subcontractors, and any significant phases of the JDA Fish Turbine Pump Repair scope.

4. Section 00 45 00 - Representations and Certifications

The offeror shall complete all representations and certifications in Section 00 45 00 and also ensure current registration and completed/updated Annual Representation and Certifications on the System for Award Management (SAM) website, https://www.sam.gov.

BIDDER INQUIRES

All inquiries regarding this solicitation are to be submitted via ProjNet-Bid at https://www.projnet.org/projnet/. Telephone and email inquiries will not be accepted. ProjNet-Bid is a web-based program that allows offerors to post questions regarding the solicitation, and to view all questions by other offerors, and answers by the U.S. Army Corps of Engineers. No response will be posted to inquires after Close of Business on the seventh business day proceeding the solicitation due date. All bidders will be held to have reviewed the questions and responses in ProjNet-Bid prior to bid submission.

To access the ProjNet-Bid website for the first time:

1) Register

2) Click Quick Add Key. (The Agency is USACE)

3) Enter the following information for access:

The Bidder Inquiry Key for this solicitation is **TPZ795-8Z56KP**

Valid business contact information (e.g. Company name, contact person, business address, phone number and email address). (required on first project only)

For Questions about the ProjNet-Bid, access the help tab on the ProjNet website.

52.233-2 Service of Protest.

As prescribed in 33.107(a), insert the following provision:

Service of Protest (2026-02)

(a) Protests, (as defined in FAR 33.102), that are filed directly with an agency, and copies of any protests that are filed with the Government Accountability Office (GAO), must be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from Cory R. Pfenning.

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

(End of provision)

*** END OF NARRATIVE ***

FAR Provisions Incorporated by Reference

Number	Title	Effective Date	Alternate Deviation	Variation Effective Date
52.204-7	System for Award Management-Registration.	2026-02		
52.214-3	Amendments to Invitations for Bids.	2026-02		
52.214-4	False Statements in Bids.	1984-04		

52.214-5	Submission of Bids.	2026-02
52.214-6	Explanation to Prospective Bidders.	1984-04
52.214-7	Late Submissions, Modifications, and Withdrawals of Bids.	2026-02
52.214-34	Submission of Offers in the English Language.	1991-04
52.214-35	Submission of Offers in U.S. Currency.	1991-04
52.222-5	Construction Wage Rate Requirements-Secondary Site of the Work. (Deviation)	2026-02
52.225-10	Notice of Buy American Requirement-Construction Materials.	2014-05
52.233-2	Service of Protest.	2026-02

DFARS Provisions Incorporated by Reference

Number	Title	Effective Date	Alternate Deviation	Variation Effective Date
252.204-7019	Notice of NIST SP 800-171 DoD Assessment Requirements.	2023-11		
252.204-7024	Notice on the Use of the Supplier Performance Risk System.	2023-03		
252.215-7013	Supplies and Services Provided by Nontraditional Defense	2023-01		

Contractors.

FAR Provisions Incorporated by Full Text

Number	Title	Effective Date	Alternate Deviation	Variation Effective Date
52.216-1	Type of Contract.	2026-02		

Type of Contract (Feb 2026)

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

(End of provision)

52.228-1	Bid Guarantee.	1996-09		

Bid Guarantee (Sept 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 clause)

52.252-1	Solicitation Provisions Incorporated by Reference.	1998-02

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):

<font color="#000000">https://www.acquisition.gov/

(End of provision)

52.252-5	Authorized Deviations in Provisions.	2020-11

Authorized Deviations in Provisions (Nov 2020)

(a) The use in this solicitation of any Federal Acquisition Regulation (48 CFR Chapter 1) provision with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the provision.

(b) The use in this solicitation of any Defense Federal Acquisition Regulation Supplement (48 CFR Chapter 2) provision with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

(End of provision)

DFARS Provisions Incorporated by Full Text

Number	Title	Effective Date	Alternate Deviation	Variation Effective Date
252.204-7025	Notice of Cybersecurity Maturity Model Certification Level Requirements.	2025-11		

NOTICE OF CYBERSECURITY MATURITY MODEL CERTIFICATION LEVEL REQUIREMENTS (NOV 2025)

(a) *Definitions*. As used in this provision, "controlled unclassified information (CUI)," "current," "Cybersecurity Maturity Model Certification (CMMC) status," "Cybersecurity Maturity Model Certification unique identifier (CMMC UID)," "Federal contract information (FCI)", and "plan of action and milestones" have the meaning given in the Defense Federal Acquisition Regulation Supplement 252.204-7021, Contractor Compliance With the Cybersecurity Maturity Model Certification Level Requirements, clause of this solicitation.

(b)(1) *Cybersecurity Maturity Model Certification (CMMC) level*. The CMMC level required by this solicitation is: CMMC Level 1 (Self). This CMMC level, or higher (see 32 CFR part 170), is required prior to award for each contractor information system that will process, store, or transmit Federal contract information (FCI) or controlled unclassified information (CUI) during performance of the contract.

(2) The Offeror will not be eligible for award of a contract, task order, or delivery order resulting from this solicitation if the Offeror does not have, for each of the contractor information systems that will process, store, or transmit FCI or CUI and that will be used in performance of a contract resulting from this solicitation-

(i) The current CMMC status entered in the Supplier Performance Risk System (SPRS) (*https://piee.eb.mil*) at the CMMC level required by paragraph (b)(1) of this provision; and

(ii) A current affirmation of continuous compliance with the security requirements identified at 32 CFR part 170 in SPRS.

(c) *Plan of action and milestones*. If the Offeror has a CMMC Status of Conditional, the Offeror shall successfully close out a valid plan of action and milestones (32 CFR 170.21) to achieve a CMMC Status of Final.

(d) *CMMC unique identifiers*. The Offeror shall provide, in the proposal, the CMMC unique identifier(s) (CMMC UIDs) issued by SPRS for each contractor information system that will process, store, or transmit FCI or CUI during performance of a contract, task order, or delivery order resulting from this solicitation. The Offeror also shall update the list when new CMMC UIDs are generated in SPRS. The CMMC UIDs are provided in SPRS after the Offeror enters the results of self-assessment(s) for each such information system.

(End of provision)

Section 00 22 00 - Supplementary Instructions

FAR Provisions Incorporated by Reference

Number	Title	Effective Date	Alternate Deviation	Variation Effective Date
52.217-5	Evaluation of Options.	2026-02		

Section 00 45 00 - Representations and Certifications

FAR Provisions Incorporated by Reference

Number	Title	Effective Date	Alternate Deviation	Variation Effective Date
52.203-11	Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions.	2024-09		
52.229-12	Tax on Certain Foreign Procurements.	2021-02		

DFARS Provisions Incorporated by Reference

Number	Title	Effective Date	Alternate Deviation	Variation Effective Date
252.203-7005	Representation Relating to Compensation of Former DoD Officials.	2022-09		
252.204-7008	Compliance with Safeguarding Covered Defense Information Controls.	2016-10		
252.225-7055	Representation Regarding Business Operations with the Maduro Regime.	2022-05		

FAR Provisions Incorporated by Full Text

Number	Title	Effective	Alternate	Variation

		Date	Deviation	Effective Date
52.209-7	Information Regarding Responsibility Matters. (Deviation)	2026-02		

Information Regarding Responsibility Matters (Feb 2026) (Deviation)

(a) Definitions. As used in this provision-

Administrative proceeding means a non-judicial process that is adjudicatory in nature in order to make a determination of fault or liability (e.g., Securities and Exchange Commission Administrative Proceedings, Civilian Board of Contract Appeals Proceedings, and Armed Services Board of Contract Appeals Proceedings). This includes administrative proceedings at the Federal and State level but only in connection with performance of a Federal contract or grant. It does not include agency actions such as contract audits, site visits, corrective plans, or inspection of deliverables.

Federal contracts and grants with total value greater than $10,000,000 means-

(1) The total value of all current, active contracts and grants, including all priced options; and

(2) The total value of all current, active orders including all priced options under indefinite-delivery, indefinite-quantity, 8(a), or requirements contracts (including task and delivery and multiple-award Schedules).

Principal means an officer, director, owner, partner, or a person having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a division or business segment; and similar positions).

(b) The offeror [ ] has [ ] does not have current active Federal contracts and grants with total value greater than $10,000,000.

(c) If the offeror checked "has" in paragraph (b) of this provision, the offeror represents, by submission of this offer, that the information it has entered in the Federal Awardee Performance and Integrity Information System (FAPIIS) is current, accurate, and complete as of the date of

submission of this offer with regard to the following information:

(1) Whether the offeror, and/or any of its principals, has or has not, within the last five years, in connection with the award to or performance by the offeror of a Federal contract or grant, been the subject of a proceeding, at the Federal or State level that resulted in any of the following dispositions:

(i) In a criminal proceeding, a conviction.

(ii) In a civil proceeding, a finding of fault and liability that results in the payment of a monetary fine, penalty, reimbursement, restitution, or damages of $5,000 or more.

(iii) In an administrative proceeding, a finding of fault and liability that results in-

(A) The payment of a monetary fine or penalty of $5,000 or more; or

(B) The payment of a reimbursement, restitution, or damages in excess of $100,000.

(iv) In a criminal, civil, or administrative proceeding, a disposition of the matter by consent or compromise with an acknowledgment of fault by the Contractor if the proceeding could have led to any of the outcomes specified in paragraphs (c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this provision.

(2) If the offeror has been involved in the last five years in any of the occurrences listed in (c)(1) of this provision, whether the offeror has provided the requested information with regard to each occurrence.

(d) The offeror shall post the information in paragraphs (c)(1)(i) through (c)(1)(iv) of this provision in FAPIIS as required through maintaining an active registration in the System for Award Management, which can be accessed via https://www.sam.gov (see 52.204-7).

(End of provision)

52.209-13	Violation of Arms Control Treaties or Agreements-Certification. (Deviation)	2026-02

Violation of Arms Control Treaties or Agreements-Certification (Feb 2026) (Deviation)

(a) This provision does not apply to acquisitions at or below the simplified acquisition threshold or to acquisitions of commercial products and commercial services as defined in Federal Acquisition Regulation 2.101.

(b) Certification. [Offeror shall check either (1) or (2).]

[ ] (1) The Offeror certifies that-

(i) It does not engage and has not engaged in any activity that contributed to or was a significant factor in the President's or Secretary of State's determination that a foreign country is in violation of its obligations undertaken in any arms control, nonproliferation, or disarmament agreement to which the United States is a party, or is not adhering to its arms control, nonproliferation, or disarmament commitments in which the United States is a participating state. The determinations are described in the most recent unclassified annual report provided to Congress pursuant to section 403 of the Arms Control and Disarmament Act (22 U.S.C. 2593a). The report is available at https://www.state.gov/bureaus-offices/under-secretary-for-arms-control-and-international-security-affairs/bureau-of-arms-control-verification-and-compliance/; and

(ii) No entity owned or controlled by the Offeror has engaged in any activity that contributed to or was a significant factor in the President's or Secretary of State's determination that a foreign country is in violation of its obligations undertaken in any arms control, nonproliferation, or disarmament agreement to which the United States is a party, or is not adhering to its arms control, nonproliferation, or disarmament commitments in which the United States is a participating state. The determinations are described in the most recent unclassified annual report provided to Congress pursuant to section 403 of the Arms Control and Disarmament Act (22 U.S.C. 2593a). The report is available at https://www.state.gov/bureaus-offices/under-secretary-for-arms-control-and-international-security-affairs/bureau-of-arms-control-verification-and-compliance/; or

[ ] (2) The Offeror is providing separate information with its offer in accordance with paragraph (d)(2) of this provision.

(c) Procedures for reviewing the annual unclassified report (see paragraph (b)(1) of this provision). For clarity, references to the report in this section refer to the entirety of the annual unclassified report, including any separate reports that are incorporated by reference into the

annual unclassified report.

(1) Check the table of contents of the annual unclassified report and the country section headings of the reports incorporated by reference to identify the foreign countries listed there. Determine whether the Offeror or any person owned or controlled by the Offeror may have engaged in any activity related to one or more of such foreign countries.

(2) If such activity might have occurred, review all findings in the report associated with those foreign countries to determine whether or not each such foreign country was determined to be in violation of its obligations undertaken in an arms control, nonproliferation, or disarmament agreement to which the United States is a party, or to be not adhering to its arms control, nonproliferation, or disarmament commitments in which the United States is a participating state. For clarity, in the annual report an explicit certification of non-compliance is equivalent to a determination of violation. However, the following statements in the annual report are not equivalent to a determination of violation:

(i) An inability to certify compliance.

(ii) An inability to conclude compliance.

(iii) A statement about compliance concerns.

(3) If so, determine whether the Offeror or any person owned or controlled by the Offeror has engaged in any activity that contributed to or is a significant factor in the determination in the report that one or more of these foreign countries is in violation of its obligations undertaken in an arms control, nonproliferation, or disarmament agreement to which the United States is a party, or is not adhering to its arms control, nonproliferation, or disarmament commitments in which the United States is a participating state. Review the narrative for any such findings reflecting a determination of violation or non-adherence related to those foreign countries in the report, including the finding itself, and to the extent necessary, the conduct giving rise to the compliance or adherence concerns, the analysis of compliance or adherence concerns, and efforts to resolve compliance or adherence concerns.

(4) The Offeror may submit any questions with regard to this report by email to NDAA1290Cert@state.gov. To the extent feasible, the Department of State will respond to such email inquiries within 3 business days.

(d) Do not submit an offer unless-

(1) A certification is provided in paragraph (b)(1) of this provision and submitted with the offer; or

(2) In accordance with paragraph (b)(2) of this provision, the Offeror provides with its offer information that the President of the United States has

(i) Waived application under 22 U.S.C. 2593e(d) or (e); or

(ii) Determined under 22 U.S.C. 2593e(g)(2) that the entity has ceased all activities for which measures were imposed under 22 U.S.C. 2593e(b).

(e) Remedies. The certification in paragraph (b)(1) of this provision is a material representation of fact upon which reliance was placed when making award. If the Government later determines that the Offeror knowingly submitted a false certification, in addition to other remedies available to the Government, such as suspension or debarment, the Contracting Officer may terminate any contract resulting from the false certification.

(End of provision)

52.219-1	Small Business Program Representations. (Deviation)	2026-02

Small Business Program Representations (Feb 2026) (Deviation)

(a) *Definitions*. As used in this provision-

Economically disadvantaged women-owned small business (EDWOSB) concern means a small business concern that is at least 51 percent directly and unconditionally owned by, and the management and daily business operations of which are controlled by, one or more women who are citizens of the United States and who are economically disadvantaged in accordance with 13 CFR part 127, and the concern is certified by SBA or an approved third-party certifier in accordance with 13 CFR 127.300. It automatically qualifies as a women-owned small business concern eligible under the WOSB Program.

HUBZone small business concern means a small business concern that meets the requirements described in 13 CFR 126.200, is certified by the Small Business Administration (SBA) and designated by SBA as a HUBZone small business concern in the Small Business Search (SBS) (13 CFR 126.103).

Service-disabled veteran-owned small business (SDVOSB) concern eligible under the SDVOSB Program means an SDVOSB concern that is designated in the System for Award Management (SAM) as certified by the Small Business Administration (SBA) in accordance with 13 CFR 128.300.

Small business concern-

(1) Means a concern, including its affiliates, that is independently owned and operated, not dominant in its field of operation, and qualified as a small business under the criteria in 13 CFR part 121 and the size standard in paragraph (b) of this provision.

(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.

Small disadvantaged business concern means a small business concern that-

(1) Is at least 51 percent unconditionally and directly owned (as defined at 13 CFR 124.105) by one or more socially disadvantaged (as defined at 13 CFR 124.103) and economically disadvantaged (as defined at 13 CFR 124.104) individuals who are citizens of the United States, and

(2) The management and daily business operations of which are controlled (as defined at 13 CFR 124.106) by individuals who meet the criteria in paragraph (1) of this definition.

Women-owned small business (WOSB) concern eligible under the WOSB Program (in accordance with 13 CFR part 127) means a small business concern that is at least 51 percent directly and unconditionally owned by, and the management and daily business operations of which are controlled by, one or more women who are citizens of the United States, and the concern is certified by SBA or an approved third-party certifier in accordance with 13 CFR 127.300.

(b)

(1) The North American Industry Classification System (NAICS) code for this acquisition is 237990.

(2) The small business size standard is $45,000,000.00.

(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 (*i.e.*, nonmanufacturer), is 500 employees, or 150 employees for information technology value-added resellers under NAICS code 541519, 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.

(c) *Representations.*

(1) The offeror represents as part of its offer that-

(i) it is, is not a small business concern; or

(ii) It is, is not a small business joint venture that complies with the requirements of 13 CFR 121.103(h) and 13 CFR 125.8(a) and (b). [_____The offeror shall enter the name and unique entity identifier of each party to the joint venture: __.]

(2) [*Complete only if the offeror represented itself as a small business concern in paragraph (c) (1) of this provision.]* The offeror represents that it is, is not a women-owned small disadvantage business concern.

(3) *Women-owned small business (WOSB) joint venture eligible under the WOSB Program.* The offeror represents as part of its offer that it is, is not a joint venture that complies with the requirements of 13 CFR 127.506(a) through (c). [____The offeror shall enter the name and unique entity identifier of each party to the joint venture: __.]

(4) *Economically disadvantaged women-owned small business (EDWOSB) joint venture.* The offeror represents as part of its offer that it is, is not a joint venture that complies with the requirements of 13 CFR 127.506(a) through (c). [____The offeror shall enter the name and unique entity identifier of each party to the joint venture: __.]

(5) *SDVOSB joint venture eligible under the SDVOSB Program*. [*Complete only if the offeror is certified as a SDVOSB concern*]. The offeror represents as part of its offer that it is, is not a SDVOSB joint venture eligible under the SDVOSB Program that complies with the requirements of 13 CFR 128.402. [____The offeror shall enter the name and unique entity identifier of each party to the joint venture:__.]

(6) *HUBZone joint venture eligible under the HUBZone Program.* [*Complete only if the offeror is a HUBZone small business concern.*] The offeror represents, as part of its offer, that it is, is not a HUBZone joint venture that complies with the requirements of 13 CFR 126.616(a) through (c). [____The offeror shall enter the name and unique entity identifier of each party to the joint venture: __.] Each HUBZone small business concern participating in the HUBZone joint venture must be certified as a HUBZone concern.

(d) *Notice.* Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a business concern that is small, HUBZone small, small disadvantaged, service-disabled veteran-owned small, economically disadvantaged women-owned small, or women-owned small eligible under the WOSB Program in order to obtain a contract to be awarded under the preference programs established pursuant to section 8, 9, 15, 31, and 36 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, will be-

(1) Punished by imposition of fine, imprisonment, or both;

(2) Subject to administrative remedies, including suspension and debarment; and

(3) Ineligible for participation in programs conducted under the authority of the Act.

(End of provision)

DFARS Provisions Incorporated by Full Text

Number	Title	Effective Date	Alternate Deviation	Variation Effective Date
252.204-7017	Prohibition on the Acquisition of Covered Defense Telecommunications Equipment or Services-Representation.	2021-05		

PROHIBITION ON THE ACQUISITION OF COVERED DEFENSE TELECOMMUNICATIONS EQUIPMENT OR SERVICES-REPRESENTATION (MAY 2021)

The Offeror is not required to complete the representation in this provision if the Offeror has represented in the provision at 252.204-7016, Covered Defense Telecommunications Equipment or Services-Representation, that it "does not provide covered defense 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."

(a) Definitions. "Covered defense telecommunications equipment or services," "covered

mission," "critical technology," and "substantial or essential component," as used in this provision, have the meanings given in the 252.204-7018 clause, Prohibition on the Acquisition of Covered Defense Telecommunications Equipment or Services, of this solicitation.

(b) Prohibition. Section 1656 of the National Defense Authorization Act for Fiscal Year 2018 (Pub. L. 115-91) prohibits agencies from procuring or obtaining, or extending or renewing a contract to procure or obtain, any equipment, system, or service to carry out covered missions that uses covered defense telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system.

(c) Procedures. The Offeror shall review the list of excluded parties in the System for Award Management (SAM) at https://www.sam.gov for entities that are excluded when providing any equipment, system, or service to carry out covered missions that uses covered defense telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system, unless a waiver is granted.

(d) Representation. If in its annual representations and certifications in SAM the Offeror has represented in paragraph (c) of the provision at 252.204-7016, Covered Defense Telecommunications Equipment or Services-Representation, that it "does" provide covered defense 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, then the Offeror shall complete the following additional representation:

The Offeror represents that it [ ] will [ ] will not provide covered defense telecommunications equipment or services as a part of its offered products or services to DoD in the performance of any award resulting from this solicitation.

(e) Disclosures. If the Offeror has represented in paragraph (d) of this provision that it "will provide covered defense telecommunications equipment or services," the Offeror shall provide the following information as part of the offer:

(1) A description of all covered defense telecommunications equipment and services offered (include brand or manufacturer; product, such as model number, original equipment manufacturer (OEM) number, manufacturer part number, or wholesaler number; and item description, as applicable).

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

(3) For services, the entity providing the covered defense telecommunications services (include entity name, unique entity identifier, and Commercial and Government Entity (CAGE) code, if known).

(4) For equipment, the entity that produced or provided the covered defense telecommunications equipment (include entity name, unique entity identifier, CAGE code, and whether the entity was the OEM or a distributor, if known).

(End of provision)

Section 00 70 00 - Conditions of the Contract

Only a warranted Contracting Officer (either a Contracting Officer or an Administrative Contracting Officer (ACO)), acting within their appointed limits, has the authority to issue modifications or otherwise change the terms and conditions of this contract. If an individual other than the Contracting Officer attempts to make changes to the terms and conditions of this contract, you shall not proceed with the change and shall immediately notify the Contracting Officer. Proceeding with any work not authorized by the Contracting Officer will be at the Contractor's own risk.

*** END OF NARRATIVE ***

FAR Clauses Incorporated by Reference

Number	Title	Effective Date	Alternate Deviation	Variation Effective Date
52.222-3	Convict Labor.	2026-02		
52.222-7	Withholding of Funds.	2026-02		
52.222-9	Apprentices and Trainees. (DEVIATION 2025-O0003)	2026-02	Deviation 2025-O0003	2025-03
52.223-23	Sustainable Products and Services. (DEVIATION 2025-O0004)	2026-02	Deviation 2025-O0004	2025-03
52.244-6	Subcontracts for Commercial Products and Commercial Services. (DEVIATION 2025-O0003)	2026-02	Deviation 2025-O0003	2025-03

DFARS Clauses Incorporated by Reference

Number	Title	Effective Date	Alternate Deviation	Variation Effective Date

252.204-7012	Safeguarding Covered Defense Information and Cyber Incident Reporting. (DEVIATION 2024-O0013 REVISION 1)	2024-05	Deviation 2024-O0013	2024-05
252.215-7994	Requirements for Certified Cost or Pricing Data and Data Other Than Certified Cost or Pricing Data. (DEVIATION 2026-O0048)	2026-03	Deviation 2026-O0048	2026-03

FAR Clauses Incorporated by Full Text

Number	Title	Effective Date	Alternate Deviation	Variation Effective Date
52.204-8	Annual Representations and Certifications. (DEVIATION 2025-O0003 and 2025-O0004)	2025-03	Deviation 2025-O0004	2025-03

Annual Representations and Certifications (MAR 2025)(DEVIATION 2025-O0003 and 2025-O0004)

(a)

(1) The North American Industry Classification System (NAICS) code for this acquisition is 237990.

(2) The small business size standard is $45,000,000.

(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, or 150 employees for information technology value-added resellers under NAICS code 541519 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:

(i) Paragraph (d) applies.

(ii) 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) [Reserved]

(xv) [Reserved]

(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 biobased products in USDA-designated product categories; or include the clause at 52.223-2, Reporting 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) [Reserved]

(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 II and III.) This provision applies to solicitations containing the clause at 52.225-3.

(A) If the acquisition value is less than $50,000, the basic provision applies.

(B) If the acquisition value is $50,000 or more but is less than $100,000, the provision with its Alternate II applies.

(C) If the acquisition value is $100,000 or more but is less than $102,280, 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 Certifications. 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) 52.227-6, Royalty Information.

(A) Basic.

(B) Alternate I.

(vii) 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 website 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)

52.217-7	Option for Increased Quantity-Separately Priced Line Item.	1989-03

Option for Increased Quantity-Separately Priced Line Item (Mar 1989)

For optional Contract Line Item(s) CLINs 0007 - 0018, upon exercise of one or more of these options the contract physical completion date shall be extended by a single period of one (1) year from the then current contract physical completion date. The Contractor shall perform all work associated with any such exercised optional Contract Line Item(s) so that such work is fully completed by the revised contract physical completion date and in accordance with all applicable work windows, access restrictions, and environmental or regulatory limitations stated in the specifications and drawings.

Option CLINs 0007 - 0012 - The Contracting Officer may exercise up to 365 days after award

Option CLINs 0013 - 0018 - The Contracting Officer may exercise up to 730 days after award

(End of clause)

52.219-14	Limitations on Subcontracting (DEVIATION 2021-O0008)	2026-02	Deviation 2021-O0008	2023-02

LIMITATIONS ON SUBCONTRACTING (FEB 2023) (DEVIATION 2021-O0008)

(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, excluding certain other direct costs and certain work performed outside the United States (see paragraph (e)(1)(i)), 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. The following services may be excluded from the 50 percent limitation:

(i) Other direct costs, to the extent they are not the principal purpose of the acquisition and small business concerns do not provide the service. Examples include airline travel, work performed by a transportation or disposal entity under a contract assigned the environmental remediation NAICS code 562910), cloud computing services, or mass media purchases.

(ii) Work performed outside the United States on awards made pursuant to the Foreign Assistance Act of 1961, or work performed outside the United States required to be performed by a local contractor.

(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.]

<font color="#000000"> [X] <font color="#0000ff"> By 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.

(1) In a joint venture comprised of a small business protege and its mentor approved by the Small Business Administration, the small business protege shall perform at least 40 percent of the work performed by the joint venture. Work performed by the small business protege in the joint venture must be more than administrative functions.

(2) In an 8(a) joint venture, the 8(a) participant(s) shall perform at least 40 percent of the work performed by the joint venture. Work performed by the 8(a) participants in the joint venture must be more than administrative functions.

(End of clause)

52.240-90	Security Prohibitions and Exclusions Representations and Certifications.	2026-02

Security Prohibitions and Exclusions Representations and Certifications (Feb 2026)

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

Backhaul, covered article, covered telecommunications equipment or services, critical technology, FASCSA order, Intelligence community, interconnection arrangements, national security system, roaming, sensitive compartmented information, sensitive compartmented information system, source, and substantial or essential component have the meanings provided in the clause 52.240-91, Security Prohibitions and Exclusions.

Business operations means engaging in commerce in any form, including by acquiring, developing, maintaining, owning, selling, possessing, leasing, or operating equipment, facilities, personnel, products, services, personal property, real property, or any other apparatus of business or commerce.

Marginalized populations of Sudan means-

(1) Adversely affected groups in regions authorized to receive assistance under section 8(c) of the Darfur Peace and Accountability Act (Pub. L. 109-344) (50 U.S.C. 1701 note); and

(2) Marginalized areas in Northern Sudan described in section 4(9) of such Act.

Restricted business operations means business operations in Sudan that include power production activities, mineral extraction activities, oil-related activities, or the production of military equipment, as those terms are defined in the Sudan Accountability and Divestment Act of 2007 (Pub. L. 110-174). Restricted business operations do not include business operations that the person (as that term is defined in Section 2 of the Sudan Accountability and Divestment Act of 2007) conducting the business can demonstrate-

(1) Are conducted under contract directly and exclusively with the regional government of southern Sudan;

(2) Are conducted under specific authorization from the Office of Foreign Assets Control in the Department of the Treasury, or are expressly exempted under Federal law from the requirement to be conducted under such authorization;

(3) Consist of providing goods or services to marginalized populations of Sudan;

(4) Consist of providing goods or services to an internationally recognized peacekeeping force or humanitarian organization;

(5) Consist of providing goods or services that are used only to promote health or education; or

(6) Have been voluntarily suspended.

Sensitive technology-

(1) Means hardware, software, telecommunications equipment, or any other technology that is to be used specifically-

(i) To restrict the free flow of unbiased information in Iran; or

(ii) To disrupt, monitor, or otherwise restrict speech of the people of Iran; and

(2) Does not include information or informational materials the export of which the President does not have the authority to regulate or prohibit pursuant to section 203(b)(3) of the International Emergency Economic Powers Act (50 U.S.C. 1702(b)(3)).

(b) Procedures.

(1) Covered telecommunications and video surveillance. The Offeror shall review the list of excluded parties in the System for Award Management (SAM) at https://www.sam.gov for entities excluded from receiving federal awards for "covered telecommunications equipment or services."

(2) FASCSA Orders.

(i) The Offeror shall search in SAM for the phrase "FASCSA order" for any covered article, or any products or services produced or provided by a source, if there is an applicable FASCSA order described in paragraph (e) of FAR 52.240-91, Security Prohibitions and Exclusions.

(ii) The Offeror shall review the solicitation for any FASCSA orders that are not in SAM but are effective and apply to the solicitation and resultant contract (see FAR 40.204-1(c)(2)).

(iii) FASCSA orders issued after the date of solicitation do not apply unless added by an amendment to the solicitation.

(c) Covered telecommunications equipment or services representations. By submission of its offer, the Offeror represents that, after conducting a reasonable inquiry (that looks at any information in the Offeror's possession but does not need to include an internal or third-party audit)-

(1) It 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, except as waived by the solicitation, or as disclosed in paragraph (g); and

(2) It does not use covered telecommunications equipment or services, or use any equipment, system, or service that uses covered telecommunications equipment or services, except as waived by the solicitation, or as disclosed in paragraph (g).

(d) FASCSA Representation. By submission of this offer, the offeror represents that it has conducted a reasonable inquiry, and that the offeror does not propose to provide or use in response to this solicitation any covered article, or any products or services produced or provided by a source, if the covered article or the source is prohibited by an applicable FASCSA order in effect on the date the solicitation was issued, except as waived by the solicitation, or as disclosed in paragraph (g). A reasonable inquiry will look at any information in the offeror's possession but does not need to include an internal or third-party audit.

(e) Sudan certification. By submission of its offer, the offeror certifies, after conducting a reasonable inquiry (that looks at any information in the offeror's possession but does not need to include an internal or third-party audit), that the offeror does not conduct any restricted business operations in Sudan.

(f) Iran Representation and Certifications.

(1) Except as provided in paragraph (f)(2) of this provision or if a waiver has been granted in accordance with FAR 40.203-3, the offeror, after conducting a reasonable inquiry (that looks at any information in the offeror's possession but does not need to include an internal or third-party audit), by submission of its offer-

(i) Represents, to the best of its knowledge and belief, that the offeror does not export any sensitive technology to the government of Iran or any entities or individuals owned or controlled by, or acting on behalf or at the direction of, the government of Iran;

(ii) Certifies that the offeror, or any person (as defined at section 15 of the Iran Sanctions Act of 1996, Pub. L. 104-172, 50 U.S.C. 1701 note) owned or controlled by the offeror, does not engage in any activities for which sanctions may be imposed under section 5 of the Act. These sanctioned activities are in the areas of development of the petroleum resources of Iran, production of refined petroleum products in Iran, sale and provision of refined petroleum products to Iran, and contributing to Iran's ability to acquire or develop certain weapons or technologies; and

(iii) Certifies that the offeror, and any person owned or controlled by the offeror, does not knowingly engage in any transaction that exceeds $15,000 with Iran's Revolutionary Guard Corps or any of its officials, agents, or affiliates, the property and interests in property of which are blocked pursuant to the International Emergency Economic Powers Act (50 U.S.C. 1701 et seq.) (see OFAC's Specially Designated Nationals and Blocked Persons List at https://www.treasury.gov/resource-center/sanctions/SDN-List/Pages/default.aspx)

(2) Exception for trade agreements. The representation and certification requirements of paragraph (f)(1) of this provision do not apply if-

(i) This solicitation includes a trade agreements notice or certification (e.g., 52.225-6, Trade Agreements Certificate); and

(ii) The offeror has certified that all the offered products to be supplied are designated country end products or designated country construction material.

(iii) The offeror shall email questions concerning sensitive technology to the Department of State at CISADA106@state.gov.

(g) Disclosure.

(1) If the Offeror is not able to represent compliance with the prohibitions in paragraphs (c) or (d), then the Offeror shall disclose within 72 hours to the contracting office identified in paragraph (g)(2) the following information for each product or service not compliant:

(i) Contract number and order number, if applicable;

(ii) Identification of whether this disclosure relates to paragraph (c) on covered telecommunication equipment or services, or to paragraph (d) on FASCSA orders;

(iii) A description of the products or services that the Contractor identifies or has reason to suspect is prohibited (include brand; model number, such as the original equipment manufacturer (OEM) number, manufacturer part number, or wholesaler number; and item description, as applicable);

(iv) The entity that produced the product or service (include entity name, unique entity identifier, Contractor and Government Entity (CAGE) code, facilities responsible for design, fabrication, assembly, packaging, and test of the product, and whether the entity was the OEM or a distributor (provide manufacturer codes and distributor codes used for the product));

(v) Description of the functionality of the product or service and how that functionality impacts the risk to the product or service;

(vi) An explanation of any factors relevant to determining if the product or service should be permitted by an applicable exception, exemption, or waiver (if the offeror would like the Government to consider a waiver);

(vii) Whether alternative products or services are available that would be compliant with the prohibition;

(viii) If the product or service is related to item maintenance, include the following information on the item being maintained:

(A) Brand;

(B) Model number, OEM number, manufacturer part number, or wholesaler number; and

(C) Item description, as applicable.

(ix) Any readily available information about mitigation actions undertaken or recommended.

(2) If a disclosure is required to be submitted to a contracting office, the offeror shall submit the disclosure as follows:

(i) If a Department of Defense contracting office, the offeror shall submit the disclosure to the website at https://dibnet.dod.mil.

(ii) For all other contracting offices, the Offeror shall submit the disclosure to the Contracting Officer.

(3) If the disclosure provided does not contain any of the information required by paragraph (1), and the Offeror later discovers new information that is required by paragraph (1), then the Offeror shall submit a subsequent disclosure within 72 hours of discovering the new information.

(h) Executive agency review of disclosures. The Contracting Officer will review disclosures provided in paragraph (g) to determine if any applicable waiver may be sought. The Contracting Officer may choose not to pursue a waiver and may instead make an award to an Offeror that does not require a waiver.

(End of provision)

52.240-91	Security Prohibitions and Exclusions.	2026-02

Security Prohibitions and Exclusions (Feb 2026)

(a) Definitions. As used in this clause-

American Security Drone Act-covered foreign entity means an entity included on a list that the

Federal Acquisition Security Council (FASC) develops and maintains and publishes in the System for Award Management (SAM) at https://www.sam.gov (section 1822 of Pub. L. 118-31, 41 U.S.C. 3901 note prec.).

Backhaul means intermediate links between the core network, or backbone network, and the small subnetworks at the edge of the network (e.g., connecting cell phones/towers to the core telephone network). Backhaul can be wireless (e.g., microwave) or wired (e.g., fiber optic, coaxial cable, Ethernet).

Covered application means the social networking service TikTok or any successor application or service developed or provided by ByteDance Limited or an entity owned by ByteDance Limited.

Covered article, as defined in 41 U.S.C. 4713(k), means:

(1) Information technology, as defined in 40 U.S.C. 11101, including cloud computing services of all types;

(2) Telecommunications equipment or telecommunications service, as those terms are defined in section 3 of the Communications Act of 1934 (47 U.S.C. 153);

(3) The processing of information on a Federal or non-Federal information system, subject to the requirements of the Controlled Unclassified Information program (see 32 CFR part 2002); or

(4) Hardware, systems, devices, software, or services that include embedded or incidental information technology.

Covered foreign country means The People's Republic of China.

Covered telecommunications equipment or services means-

(1) Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities);

(2) For the purpose of public safety, security of Government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities);

(3) Telecommunications or video surveillance services provided by such entities or using such equipment; or

(4) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

Critical technology means-

(1) Defense articles or defense services included on the United States Munitions List set forth in the International Traffic in Arms Regulations under subchapter M of chapter I of title 22, Code of Federal Regulations;

(2) Items included on the Commerce Control List set forth in Supplement No. 1 to part 774 of the Export Administration Regulations under subchapter C of chapter VII of title 15, Code of Federal Regulations, and controlled-

(i) Pursuant to multilateral regimes, including for reasons relating to national security, chemical and biological weapons proliferation, nuclear nonproliferation, or missile technology; or

(ii) For reasons relating to regional stability or surreptitious listening;

(3) Specially designed and prepared nuclear equipment, parts and components, materials, software, and technology covered by part 810 of title 10, Code of Federal Regulations (relating to assistance to foreign atomic energy activities);

(4) Nuclear facilities, equipment, and material covered by part 110 of title 10, Code of Federal Regulations (relating to export and import of nuclear equipment and material);

(5) Select agents and toxins covered by part 331 of title 7, Code of Federal Regulations, part 121 of title 9 of such Code, or part 73 of title 42 of such Code; or

(6) Emerging and foundational technologies controlled pursuant to section 1758 of the Export Control Reform Act of 2018 (50 U.S.C. 4817).

FASC-prohibited unmanned aircraft system means an unmanned aircraft system manufactured or assembled by an American Security Drone Act-covered foreign entity.

FASCSA order means any of the following orders issued under the Federal Acquisition Supply Chain Security Act (FASCSA) requiring removing covered articles from executive agency information systems or excluding one or more named sources or named covered articles from executive agency procurement actions, as described in 41 CFR 201-1.303(d) and (e):

(1) The Secretary of Homeland Security may issue FASCSA orders that apply to civilian agencies, to the extent not covered by paragraph (2) or (3) of this definition. This type of FASCSA order may be referred to as a Department of Homeland Security (DHS) FASCSA order.

(2) The Secretary of Defense may issue FASCSA orders that apply to the Department of Defense (DoD) and national security systems other than sensitive compartmented information systems. This type of FASCSA order may be referred to as a DoD FASCSA order.

(3) The Director of National Intelligence (DNI) may issue FASCSA orders that apply to the intelligence community and sensitive compartmented information systems, to the extent not covered by paragraph (2) of this definition. This type of FASCSA order may be referred to as a DNI FASCSA order.

Information technology, as defined in 40 U.S.C. 11101(6)-

(1) Means any equipment or interconnected system or subsystem of equipment, used in the automatic acquisition, storage, analysis, evaluation, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information by the executive agency, if the equipment is used by the executive agency directly or is used by a contractor under a contract with the executive agency that requires the use-

(i) Of that equipment; or

(ii) Of that equipment to a significant extent in the performance of a service or the furnishing of a product;

(2) Includes computers, ancillary equipment (including imaging peripherals, input, output, and storage devices necessary for security and surveillance), peripheral equipment designed to be controlled by the central processing unit of a computer, software, firmware and similar procedures, services (including support services), and related resources; but

(3) Does not include any equipment acquired by a Federal contractor incidental to a Federal

contract.

Intelligence community, as defined by 50 U.S.C. 3003(4), means the following-

(1) The Office of the Director of National Intelligence;

(2) The Central Intelligence Agency;

(3) The National Security Agency;

(4) The Defense Intelligence Agency;

(5) The National Geospatial-Intelligence Agency;

(6) The National Reconnaissance Office;

(7) Other offices within the Department of Defense for the collection of specialized national intelligence through reconnaissance programs;

(8) The intelligence elements of the Army, the Navy, the Air Force, the Marine Corps, the Coast Guard, the Federal Bureau of Investigation, the Drug Enforcement Administration, and the Department of Energy;

(9) The Bureau of Intelligence and Research of the Department of State;

(10) The Office of Intelligence and Analysis of the Department of the Treasury;

(11) The Office of Intelligence and Analysis of the Department of Homeland Security; or

(12) Such other elements of any department or agency as may be designated by the President, or designated jointly by the Director of National Intelligence and the head of the department or agency concerned, as an element of the intelligence community.

Interconnection arrangements means arrangements governing the physical connection of two or more networks to allow the use of another's network to hand off traffic where it is ultimately delivered (e.g., connecting a customer of telephone provider A to a customer of telephone company B) or sharing data and other information resources.

Kaspersky Lab-covered article means any hardware, software, or service that-

(1) Is developed or provided by a Kaspersky Lab-covered entity;

(2) Includes any hardware, software, or service developed or provided in whole or in part by a Kaspersky Lab-covered entity; or

(3) Contains components using any hardware or software developed in whole or in part by a Kaspersky Lab-covered entity.

Kaspersky Lab-covered entity means-

(1) Kaspersky Lab;

(2) Any successor entity to Kaspersky Lab, including any change in name, e.g., "Kaspersky";

(3) Any entity that controls, is controlled by, or is under common control with Kaspersky Lab; or

(4) Any entity of which Kaspersky Lab has a majority ownership.

National security system, as defined in 44 U.S.C. 3552, means any information system (including any telecommunications system) used or operated by an agency or by a contractor of an agency, or other organization on behalf of an agency-

(1) The function, operation, or use of which involves intelligence activities; involves cryptologic activities related to national security; involves command and control of military forces; involves equipment that is an integral part of a weapon or weapons system; or is critical to the direct fulfillment of military or intelligence missions, but does not include a system that is to be used for routine administrative and business applications (including payroll, finance, logistics, and personnel management applications); or

(2) Is protected at all times by procedures established for information that have been specifically authorized under criteria established by an Executive order or an Act of Congress to be kept classified in the interest of national defense or foreign policy.

Roaming means cellular communications services (e.g., voice, video, data) received from a visited network when unable to connect to the facilities of the home network either because signal coverage is too weak or because traffic is too high.

Sensitive compartmented information means classified information concerning or derived from

intelligence sources, methods, or analytical processes, which is required to be handled within formal access control systems established by the Director of National Intelligence.

Sensitive compartmented information system means a national security system authorized to process or store sensitive compartmented information.

Source means a non-Federal supplier, or potential supplier, of products or services, at any tier.

Subsidiary means an entity in which more than 50 percent of the entity is owned directly by a parent corporation or through another subsidiary of a parent corporation.

Substantial or essential component means any component necessary for the proper function or performance of a piece of equipment, system, or service.

Unmanned aircraft means an aircraft that is operated without the possibility of direct human intervention from within or on the aircraft (49 U.S.C. 44801(11)).

Unmanned aircraft system means an unmanned aircraft and associated elements (including communication links and the components that control the unmanned aircraft) that are required for the operator to operate safely and efficiently in the national airspace system (49 U.S.C. 44801(12)).

(b) Prohibitions on providing or using specific products or services in performance of contract. Unless a waiver or exception applies, the Contractor is prohibited from providing any products or services to the Government or using in the performance of the contract any of the following:

(1) A covered application on any information technology owned or managed by the Government, or on any information technology used or provided by the Contractor under this contract, including equipment provided by the Contractor's employees (section 102 of Division R of the Consolidated Appropriations Act, 2023 (Pub. L. 117-328));

(2) A Kaspersky Lab-covered article (Section 1634 of Division A of the National Defense Authorization Act for Fiscal Year 2018 (Pub. L. 115-91));

(3) Covered telecommunications equipment or services used as a substantial or essential component of any system, or as critical technology as part of any system (paragraphs (a)(1)(A) of section 889 of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232)). This does not prohibit contractors from providing-

(i) A service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or

(ii) 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) Prohibition on unmanned aircraft systems manufactured or assembled by American Security Drone Act-covered foreign entities.

(1) Prohibition. The Contractor is prohibited from-

(i) Delivering any FASC-prohibited unmanned aircraft system, which includes unmanned aircraft (i.e., drones) and associated elements (sections 1823 and 1826 of American Security Drone Act of 2023, within the National Defense Authorization Act for Fiscal Year 2024, Pub. L. 118-31, Div. A, Title XVIII, Subtitle B, 41 U.S.C. 3901 note prec.);

(ii) On or after December 22, 2025, operating a FASC-prohibited unmanned aircraft system in the performance of the contract (section 1824 of Pub. L. 118-31); and

(iii) On or after December 22, 2025, using Federal funds to procure or operate a FASC-prohibited unmanned aircraft system (section 1825 of Pub. L. 118-31).

(2) Procedures. The Contractor shall search SAM for the FASC-maintained list of American Security Drone Act-covered foreign entities before proposing, or using in performance of the contract, any unmanned aircraft system. Also, the Contractor shall ensure any effort or expenditure associated with a FASC-prohibited unmanned aircraft system is consistent with a corresponding exemption, exception, or waiver determination expressly stated in the contract.

(3) Exemptions, exceptions, and waivers. The prohibitions in paragraph (c) of this clause do not apply where the agency has determined an exemption, exception, or waiver applies, and the contract indicates that such a determination has been made. See sections 1823 through 1825 and 1832 of Public Law 118-31 for statutory requirements pertaining to exemptions, exceptions, and waivers.

(d) Prohibition on using or providing specific products or services or conducting certain transactions regardless of connection to contract.

(1) Certain telecommunications and video surveillance equipment, systems, or services.

(i) Unless an applicable waiver has been issued by the Government, the Contractor cannot use any equipment, systems, or services 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 (paragraph (a)(1)(B) of section 889 of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232)).

(ii) This prohibition applies to using covered telecommunications equipment or services, regardless of whether that use is in performance of work under a Federal contract. This does not prohibit the contractor from using-

(A) A service that connects to the facilities of a third party, such as backhaul, roaming, or interconnection arrangements; or

(B) 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) Office of Foreign Assets Control Restrictions.

(i) Except as authorized by the Office of Foreign Assets Control (OFAC) in the Department of the Treasury, the Contractor shall not acquire, for use in the performance of this contract, any supplies or services if any proclamation, Executive order, or statute administered by OFAC, or if OFAC's implementing regulations at 31 CFR chapter V, would prohibit such a transaction by a person subject to the jurisdiction of the United States.

(ii) Except as authorized by OFAC, most transactions involving Cuba, Iran, and Sudan are prohibited, as are most imports from Burma or North Korea, into the United States or its outlying areas.

(A) For lists of entities and individuals subject to economic sanctions, see OFAC's List of Specially Designated Nationals and Blocked Persons at https://home.treasury.gov/policy-issues/financial-sanctions/specially-designated-nationals-and-blocked-persons-list-sdn-human-readable-lists.

(B) For more information about these restrictions, as well as updates, see OFAC's regulations at 31 CFR chapter V and at https://home.treasury.gov/policy-issues/office-of-foreign-assets-control-sanctions-programs-and-information.

(C) To conduct electronic screens of potential parties to regulated transactions, see the consolidated screening list at https://www.trade.gov/consolidated-screening-list, which consolidates multiple export screening lists of the Departments of Commerce, State, and the Treasury.

(3) Sudan prohibition. The Contractor is prohibited from conducting any restricted business operations in Sudan in accordance with Accountability and Divestment Act of 2007 (Pub. L. 110-174).

(4) Iran prohibitions.

(i) Unless an exception applies according to paragraph (d)(4)(iii) or the Government grants a waiver, the contractor shall not engage in certain activities or transactions relating to Iran (section 6(b)(1)(A) of Iran Sanctions Act (50 U.S.C. 1701 note).

(ii) Unless an exception applies according to paragraph (d)(4)(iii) or the Government grants a waiver, contractor shall not export certain sensitive technology to Iran, as determined by the President, and has an active exclusion in SAM (22 U.S.C. 8515).

(iii) The prohibition in paragraphs (d)(4)(i) and (d)(4)(ii) do not apply if the acquisition is subject to trade agreements and the offeror certifies that all the offered products are designated country end products or designated country construction material (see part 25).

(iv) Unless an exception applies or the Government grants a waiver, contractors are prohibited from knowingly engaging in any significant transaction (i.e., over $15,000) with Iran's Revolutionary Guard Corps or any of its officials, agents, or affiliates, the property and interests in property of which are blocked according to the International Emergency Economic Powers Act (section 6(b)(1)(B) of Iran Sanctions Act (50 U.S.C. 1701 note)).

(e) Governmentwide exclusion and removal orders.

(1) Unless the Government has issued an applicable waiver, contractors shall not provide or use as part of the performance of the contract any covered article, or any products or services produced or provided by a source, if the covered article or the source is prohibited by an applicable FASCSA order as follows:

(i) For solicitations and contracts awarded by a Department of Defense contracting office, DoD FASCSA orders apply.

(ii) For all other solicitations and contracts, DHS FASCSA orders apply.

(2) The Contractor shall search for the phrase "FASCSA order" in the System for Award Management (SAM) at https://www.sam.gov to locate applicable FASCSA orders.

(3) The Government may identify in the solicitation other FASCSA orders that are not in SAM, which are effective and apply to the solicitation and resulting contract.

(4) A FASCSA order issued after the date of solicitation applies to this contract only if added by an amendment to the solicitation or modification to the contract (see FAR 40.204-1(c)).

(f) Reasonable inquiry. The contractor shall conduct a reasonable inquiry to determine if there are any prohibited products or services. The inquiry will look at any information in the entity's possession but does not need to include an internal or third-party audit.

(g) Removal of prohibited products and services. For Federal Supply Schedules, Governmentwide acquisition contracts, multi-agency contracts or any other procurement instrument intended for use by multiple agencies, upon notification from the Contracting Officer, during the performance of the contract, the Contractor shall promptly make any necessary changes or modifications to remove any product or service produced or provided by a source that this clause prohibits.

(h) General report.

(1) If the Contractor identifies or is notified by any source, (including a subcontractor at any tier), that any product or service provided or used (or to be provided or used) during contract performance does not comply with any prohibition in this clause, then the Contractor shall report the following information, or as much information is known, in writing to the contracting office as identified in paragraph (h)(2) within 72 hours:

(i) Contract number and order number, if applicable;

(ii) The specific prohibition the product or service is not complying with;

(iii) A description of the products or services that the Contractor identifies or has reason to suspect is prohibited (include brand; model number, such as the original equipment manufacturer (OEM) number, manufacturer part number, or wholesaler number; and item description, as applicable);

(iv) The entity that produced the product or service (include entity name, unique entity identifier, Contractor and Government Entity (CAGE) code, facilities responsible for design, fabrication, assembly, packaging, and test of the product, and whether the entity was the OEM or a distributor (provide manufacturer codes and distributor codes used for the product));

(v) Description of the functionality of the product or service and how that functionality impacts the risk to the product or service;

(vi) An explanation of any factors relevant to determining if the product or service should be permitted by an applicable exception, exemption, or waiver (if the contractor would like the Government to consider a waiver, and asks for such a waiver);

(vii) Whether alternative products or services are available that would comply with the prohibition;

(viii) If the product or service is related to item maintenance, include the following information on the item being maintained:

(A) Brand;

(B) Model number, OEM number, manufacturer part number, or wholesaler number; and

(C) Item description, as applicable.

(ix) Any readily available information about mitigation actions implemented or recommended.

(2) If a report must be submitted to a contracting office, the Contractor shall submit the report as follows:

(i) If a Department of Defense contracting office, the Contractor shall report to the website at https://dibnet.dod.mil.

(ii) For all other contracting offices, the Contractor shall report to the Contracting Officer.

(iii) For indefinite delivery contracts, the Contractor shall report to both the contracting office for the indefinite delivery contract and the contracting office for any affected order.

(3) If the report provided does not contain any of the information required by paragraph (h)(1) of this clause, and the contractor later discovers new information that is required by paragraph (h)

(1) of this clause, then the contractor shall submit a subsequent report within 72 hours of discovering the new information.

(4) The contractor shall also report the information in paragraph (h)(1) if the contractor wishes to ask for a waiver of the requirements of a new FASCSA order being applied through modification.

(i) New FASCSA orders report.

(1) During contract performance, the Contractor shall review SAM at least once every three months, or as advised by the Contracting Officer, to check for covered articles subject to FASCSA order(s), or for products or services produced by a source subject to FASCSA order(s) not currently identified under paragraph (e) of this clause.

(2) If the Contractor identifies a new FASCSA order(s) that could impact their supply chain, then the Contractor shall conduct a reasonable inquiry to identify whether a covered article or product or service produced or provided by a source subject to the FASCSA order(s) was provided to the Government or used during contract performance. The inquiry will look at any information in the entity's possession but does not need to include an internal or third-party audit.

(3) The Contractor shall submit a report to the contracting office identified in paragraph (h)(2) of this clause if the Contractor identifies, including through any notification by a subcontractor at any tier, that a covered article or product or service produced or provided by a source was provided to the Government or used during contract performance and is subject to a FASCSA order(s). For indefinite delivery contracts, the Contractor shall report to both the contracting office for the indefinite delivery contract and the contracting office for any affected order. The Contractor shall report the following information within 72 hours for each covered article or each product or service produced or provided by a source, where the covered article or source is subject to a FASCSA order:

(i) Contract number and order number, if applicable;

(ii) Name of the covered article or source subject to a FASCSA order;

(iii) The specific FASCSA order the product or service does not comply with;

(iv) The elements of (h)(1)(iii) through (ix) of this clause.

(j) Subcontracts. The Contractor shall insert the substance of this clause, including this

paragraph (j) but excluding subparagraphs (d)(1) and (i)(1), in all subcontracts and other contractual instruments, including subcontracts for acquiring commercial products or commercial services.

(End of clause)

52.240-93	Basic Safeguarding of Covered Contractor Information Systems.	2026-02

Basic Safeguarding of Covered Contractor Information Systems (Feb 2026)

(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-

(1) 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

(2) Does not include information provided by the Government to the public (such as on public websites) or simple transactional information (such as information 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.

(1) Basic requirements. The Contractor shall safeguard its covered contractor information systems by implementing, at 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 departments and agencies 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, other than commercially available off-the-shelf items, or commercial services), in which the subcontractor may have Federal contract information residing in or transiting through its information system.

(End of clause)

DFARS Clauses Incorporated by Full Text

Number	Title	Effective Date	Alternate Deviation	Variation Effective Date
252.204-7998	Alternate A, Annual Representations and Certifications. (DEVIATION 2026-O0043)	2026-02	Alternate A Deviation 2026-O0043	2026-02 2026-02

Alternate A, Annual Representations and Certifications (DEVIATION 2026-O0043)(FEB 2026)

Include the following paragraphs (e), (f), and (g) in the provision at FAR 52.204-7:

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

(2) If the provision at FAR 52.204-7, System for Award Management - Registration, 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 (g) of this provision instead of completing the corresponding individual representations and certifications in the solicitation. The Offeror shall indicate which option applies by checking one of the following boxes:

[ ] (i) Paragraph (g) applies.

[ ] (ii) Paragraph (g) does not apply and the Offeror has completed the individual representations and certifications in the solicitation.

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

(i) 252.204-7016, Covered Defense Telecommunications Equipment or Services--Representation. Applies to all solicitations.

(ii) 252.216-7008, Economic Price Adjustment--Wage Rates or Material Prices Controlled by a Foreign Government. Applies to solicitations for fixed-price supply and service contracts when the contract is to be performed wholly or in part in a foreign country, and a foreign government controls wage rates or material prices and may during contract performance impose a mandatory change in wages or prices of materials.

(iii) 252.225-7042, Authorization to Perform. Applies to all solicitations when performance will be wholly or in part in a foreign country.

(iv) 252.225-7049, Prohibition on Acquisition of Certain Foreign Commercial Satellite Services--Representations. Applies to solicitations for the acquisition of commercial satellite services.

(v) 252.225-7050, Disclosure of Ownership or Control by the Government of a Country that is a State Sponsor of Terrorism. Applies to all solicitations expected to result in contracts of $150,000 or more.

(vi) 252.229-7012, Tax Exemptions (Italy)--Representation. Applies to solicitations when contract performance will be in Italy.

(vii) 252.229-7013, Tax Exemptions (Spain)--Representation. Applies to solicitations when contract performance will be in Spain.

(2) The following representations or certifications in SAM are applicable to this solicitation as indicated by the Contracting Officer: [Contracting Officer check as appropriate.]

[ ](i) 252.209-7002, Disclosure of Ownership or Control by a Foreign Government.

[ ](ii) 252.225-7000, Buy American--Balance of Payments Program Certificate.

[ ](iii) 252.225-7020, Trade Agreements Certificate.

[ ]Use with Alternate I.

[ ](iv) 252.225-7031, Secondary Arab Boycott of Israel.

[ ](v) 252.225-7035, Buy American--Free Trade Agreements--Balance of Payments Program Certificate.

[ ]Use with Alternate I.

[ ]Use with Alternate II.

[ ]Use with Alternate III.

[ ]Use with Alternate IV.

[ ]Use with Alternate V.

[ ] (vi) 252.226-7002, Representation for Demonstration Project for Contractors Employing Persons with Disabilities.

[ ] (vii) 252.232-7015, Performance-Based Payments--Representation.

(g) The Offeror has completed the annual representations and certifications electronically via the SAM website at https://www.sam.gov After reviewing the SAM database 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 FAR 52.204-7 and paragraph (f) 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 4.203-1); except for the changes identified below [Offeror to insert changes, identifying change by provision 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/DFARS provision No.	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 located in the SAM database.

(End of provision)

252.215-7992	Only One Offer. (DEVIATION 2026-O0048)	2026-03	Deviation 2026-O0048	2026-03

ONLY ONE OFFER (DEVIATION 2026-O0048) (MAR 2026)

(a) Cost or pricing data requirements. After initial submission of offers, if the Contracting Officer notifies the Offeror that only one offer was received, the Offeror agrees to--

(1) Submit any additional cost or pricing data that is required in order to determine whether the price is fair and reasonable (10 U.S.C. 3705) or to comply with the statutory requirement for certified cost or pricing data (10 U.S.C. 3702); and

(2) Except as provided in paragraph (b) of this provision, if the acquisition exceeds the certified cost or pricing data threshold and an exception to the requirement for certified cost or pricing data at FAR 15.403-2(b)(2) through (5) does not apply, certify all cost or pricing data in accordance with paragraph (c) of DFARS provision 252.215-7994, Requirements for Certified Cost or Pricing Data and Data Other Than Certified Cost or Pricing Data, of this solicitation.

(b) Canadian Commercial Corporation. If the Offeror is the Canadian Commercial Corporation, certified cost or pricing data are not required. If the Contracting Officer notifies the Canadian Commercial Corporation that additional data other than certified cost or pricing data are required in accordance with DFARS 225.870-4(c), the Canadian Commercial Corporation shall obtain and provide the following:

(1) Profit rate or fee (as applicable).

(2) Analysis provided by Public Works and Government Services Canada to the Canadian Commercial Corporation to determine a fair and reasonable price (comparable to the analysis required at 15.404).

(3) Data other than certified cost or pricing data necessary to permit a determination by the U. S. Contracting Officer that the proposed price is fair and reasonable [U.S. Contracting Officer to provide description of the data required in accordance with FAR 15.403-1 with the notification].

____

(4) As specified in FAR 15.403-1(d), an offeror who does not comply with a requirement to submit data that the U.S. Contracting Officer has deemed necessary to determine price reasonableness or cost realism is ineligible for award unless the head of the contracting activity determines that it is in the best interest of the Government to make the award to that offeror.

(c) Subcontracts. Unless the Offeror is the Canadian Commercial Corporation, the Offeror shall insert the substance of this provision, including this paragraph (c), in all subcontracts exceeding the simplified acquisition threshold defined in FAR part 2.

(End of provision)

252.240-7997	NIST SP 800-171 DoD Assessment Requirements. (DEVIATION 2026-O0025)	2026-02	Deviation 2026-O0025	2026-02

NIST SP 800-171 DOD ASSESSMENT REQUIREMENTS (DEVIATION 2026-O0025)(FEB 2026)

(a) Definitions.

Covered contractor information system has the meaning given in the clause 252.204-7012, Safeguarding Covered Defense Information and Cyber Incident Reporting, of this contract.

High Assessment means an assessment that is conducted by Government personnel, trained in accordance with DoD policy and procedures, using NIST SP 800-171A, Assessing Security Requirements for Controlled Unclassified Information that--

(1) Consists of--

(i) A review of a contractor's previous assessment(s), as applicable;

(ii) A thorough document review;

(iii) Verification, examination, and demonstration of a Contractor's system security plan to validate that NIST SP 800-171 security requirements have been implemented as described in the contractor's system security plan; and

(iv) Discussions with the contractor to obtain additional information or clarification, as needed; and

(2) Results in a confidence level of “High” in the resulting score.

Medium Assessment means an assessment conducted by Government personnel, trained in accordance with DoD policy and procedures, using NIST SP 800-171A, Assessing Security Requirements for Controlled Unclassified Information that--

(1) Consists of--

(i) A review of a contractor's previous assessment(s), as applicable;

(ii) A thorough document review; and

(iii) Discussions with the contractor to obtain additional information or clarification, as needed; and

(2) Results in a confidence level of “Medium” in the resulting score.

(b) Applicability. This clause applies to covered contractor information systems that are required to comply with the National Institute of Standards and Technology (NIST) Special Publication (SP) 800-171, in accordance with Defense Federal Acquisition Regulation System (DFARS) clause at 252.204-7012, Safeguarding Covered Defense Information and Cyber Incident Reporting, of this contract.

(c) Requirements. The Contractor shall provide access to its facilities, systems, and personnel necessary for the Government to conduct a Medium or High NIST SP 800-171 DoD Assessment, using the methodology described at 32 CFR 170.24, if necessary. The results of Medium or High NIST SP 800-171 DoD Assessments, when conducted by DCMA, will take precedence over any other assessment, in accordance with 32 CFR 170.16(a)(1)(iv), 32 CFR 170.17(a)(1)(iv), and 32 CFR 170.18(a)(1)(iv).

(d) Procedures. Summary level scores for all assessments will be posted in the Supplier Performance Risk System (SPRS) (https://www.sprs.csd.disa.mil/) to provide DoD Components visibility into the summary level scores of strategic assessments.

Medium and High Assessments. DoD will post the following Medium and/or High Assessment summary level scores to SPRS for each system security plan assessed:

(i) The standard assessed (e.g., NIST SP 800-171 Rev 1).

(ii) Organization conducting the assessment, i.e., DCMA.

(iii) All industry CAGE code(s) associated with the information system(s) addressed by the system security plan.

(iv) Date and level of the assessment, i.e., medium or high.

(v) Summary level score (overall numerical score, not the individual value assigned for each

requirement).

(vi) Date that all requirements are expected to be implemented based on information gathered from associated plan(s) of action developed in accordance with NIST SP 800-171.

(e) Rebuttals. (1) DoD will provide Medium and High Assessment summary level scores to the Contractor and offer the opportunity for rebuttal and adjudication of assessment summary level scores prior to posting the summary level scores to SPRS (see SPRS User's Guide https://www.sprs.csd.disa.mil/pdf/SPRS_Awardee.pdf).

(2) Upon completion of each assessment, the contractor has 14 business days to provide additional information to demonstrate that they meet any security requirements not observed by the assessment team or to rebut the findings that may be of question.

(f) Accessibility. (1) Assessment summary level scores posted in SPRS are available to DoD personnel, and are protected, in accordance with the standards set forth in DoD Instruction 5000.79, Defense-wide Sharing and Use of Supplier and Product Performance Information (PI).

(2) Authorized representatives of the Contractor for which the assessment was conducted may access SPRS to view their own summary level scores, in accordance with the SPRS Software User's Guide for Awardees/Contractors available at https://www.sprs.csd.disa.mil/pdf/SPRS_Awardee.pdf.

(3) A High NIST SP 800-171 DoD Assessment may result in documentation in addition to that listed in this clause. DoD will retain and protect any such documentation as “Controlled Unclassified Information (CUI)” and intended for internal DoD use only. The information will be protected against unauthorized use and release, including through the exercise of applicable exemptions under the Freedom of Information Act (e.g., Exemption 4 covers trade secrets and commercial or financial information obtained from a contractor that is privileged or confidential).

(g) Subcontracts. The Contractor shall insert the substance of this clause, including this paragraph (g), in all subcontracts and other contractual instruments, including subcontracts for the acquisition of commercial products or commercial services (excluding commercially available off-the-shelf items).

(End of clause)

Section 00 72 00 - General Conditions

Period of Performance

The contractor shall begin work within 10 calendar days of receiving the Notice to Proceed (NTP), diligently prosecute the work, and complete all work, including final cleanup and all required closeout documentation (including as-built drawings), within 965 calendar days of receiving the NTP, and strictly complying with all provided Unit Outage Windows. The NTP will be issued as soon as practicable after bid opening, but no specific issuance date is guaranteed.

Commencement, Prosecution, and Completion of Work - Construction *(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 (NTP), (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than 965 calendar days of receiving the NTP.* The time stated for completion shall include final cleanup of the premises.

(End of condition)

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 by oil sample testing, alignment testing, and vibration testing using ASTM approved machinery condition monitoring techniques.

(b) Weather conditions - Weather records and reports may be obtained from the National Weather Service. The following schedule of monthly anticipated adverse weather delays is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the project (see table 1.)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No. of Days	3	1	0	0	1	1	0	0	0	0	1	3

(End of condition)

Site Visit (Construction) *(Feb 1995)*

(a) The conditions, Differing Site Conditions, and 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 --

27 April 2026 @ 1000 Pacific Time

(c) Participants will be meet at --

John Day Dam

John Day Dam Road

I-84 Exit 109

Rufus, OR 97050

(d) Additional Site Visit Requirements

(1) All prospective offerors intending to attend the site visit **must** send an RSVP to:

Kristel Flores at Kristel.M.Flores@usace.army.mil,

Cory Pfenning at Cory.R.Pfenning@usace.army.mil,

Marina Reilly-Collette at marina.i.reilly-collette@usace.army.mil,

Blaise Jones at Blaise.S.Jones@usace.army.mil, and

Adrian Mariscal-Arellano at Adrian.MariscalArellano@usace.army.mil

at *before 20 April 2026 @ 1400 Pacific Time* with the following information

(i) Company Name

(ii) Number of attendees

(iii) Name of each attendee

(iv) Citizenship of each attendee (Only U.S. citizens will be permitted to attend)

(2) The following safety gear is required at the site: Steel toed boots, hardhats, safety vests, safety glasses.

(3) Each individual must have picture identification on his/her person while at the project site. **Real ID, passport or TWIC is required**. There can be no substitutions of one individual for another. If an individual arrives at the site visit without having called ahead of time and/or without picture identification, that individual may not be allowed on the project.

(End of Condition)

252.203-7001 Prohibition on Persons Convicted of Fraud or Other Defense Contract-Related Felonies.

As prescribed in 203.570-3 , use the following clause:

PROHIBITION ON PERSONS CONVICTED OF FRAUD OR OTHER DEFENSE-CONTRACT-RELATED FELONIES (JAN 2023)

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

(1) "Arising out of a contract with the DoD" means any act in connection with--

(i) Attempting to obtain;

(ii) Obtaining; or

(iii) Performing a contract or first-tier subcontract of any agency, department, or component of the Department of Defense (DoD).

(2) "Conviction of fraud or any other felony" means any conviction for fraud or a felony in violation of state or Federal criminal statutes, whether entered on a verdict or plea, including a plea of nolo contendere, for which sentence has been imposed.

(3) "Date of conviction" means the date judgment was entered against the individual.

(b) Any individual who is convicted after September 29, 1988, of fraud or any other felony arising out of a contract with the DoD is prohibited from serving--

(1) In a management or supervisory capacity on this contract;

(2) On the board of directors of the Contractor;

(3) As a consultant, agent, or representative for the Contractor; or

(4) In any other capacity with the authority to influence, advise, or control the decisions of the Contractor with regard to this contract.

(c) Unless waived, the prohibition in paragraph (b) of this clause applies for not less than 5 years from the date of conviction.

(d) 10 U.S.C. 4656 provides that the Contractor shall be subject to a criminal penalty of not more than $500,000 if convicted of knowingly--

(1) Employing a person under a prohibition specified in paragraph (b) of this clause; or

(2) Allowing such a person to serve on the board of directors of the contractor or first-tier subcontractor.

(e) In addition to the criminal penalties contained in 10 U.S.C. 4656, the Government may consider other available remedies, such as --

(1) Suspension or debarment;

(2) Cancellation of the contract at no cost to the Government; or

(3) Termination of the contract for default.

(f) The Contractor may submit written requests for waiver of the prohibition in paragraph (b) of this clause to the Contracting Officer. Requests shall clearly identify--

(1) The person involved;

(2) The nature of the conviction and resultant sentence or punishment imposed;

(3) The reasons for the requested waiver; and

(4) An explanation of why a waiver is in the interest of national security.

(g) Subcontracts. The Contractor agrees to include the substance of this clause, appropriately modified to reflect the identity and relationship of the parties, in all first-tier subcontracts exceeding the simplified acquisition threshold in Part 2 of the Federal Acquisition Regulation, except those for commercial products, commercial services, or commercial components.

(h) Pursuant to 10 U.S.C. 4656(c), defense contractors and subcontractors may obtain information as to whether a particular person has been convicted of fraud or any other felony arising out of a contract with the DoD by contacting The Office of Justice Programs, The Denial of Federal Benefits Office, U.S. Department of Justice, telephone 301-937-1542; www.ojp.usdoj.gov/BJA /grant/DPFC.html.

(End of clause)

*** END OF NARRATIVE ***

FAR Clauses Incorporated by Reference

Number	Title	Effective Date	Alternate Deviation	Variation Effective Date
52.202-1	Definitions.	2020-06		
52.203-3	Gratuities.	1984-04		
52.203-5	Covenant Against Contingent Fees.	2014-05		
52.203-6	Restrictions on Subcontractor Sales to the Government.	2020-06		
52.203-7	Anti-Kickback Procedures.	2020-06		
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity.	2014-05		
52.203-10	Price or Fee Adjustment for Illegal or Improper Activity.	2014-05		
52.203-12	Limitation on Payments to Influence Certain Federal Transactions.	2020-06		
52.203-19	Prohibition on Requiring Certain Internal Confidentiality Agreements or Statements.	2017-01		
52.204-9	Personal Identity Verification of Contractor Personnel.	2011-01		
52.204-10	Reporting Executive Compensation and First-Tier	2026-02		

	Subcontract Awards.	
52.204-13	System for Award Management-Maintenance.	2026-02
52.204-19	Incorporation by Reference of Representations and Certifications.	2014-12
52.209-6	Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, Proposed for Debarment, or Voluntarily Excluded. (Deviation 2026-O0038)	2026-02
52.209-9	Updates of Publicly Available Information Regarding Responsibility Matters.	2026-02
52.209-10	Prohibition on Contracting With Inverted Domestic Corporations.	2026-02
52.214-18	Preparation of Bids-Construction.	1984-04
52.214-19	Contract Award-Sealed Bidding-Construction.	1996-08
52.214-26	Audit and Records-Sealed Bidding. (Deviation 2026-O0038)	2026-02
52.219-6	Notice of Total Small Business Set-Aside.	2026-02
52.219-8	Utilization of Small Business Concerns.	2026-02
52.222-4	Contract Work Hours and Safety Standards-Overtime	2026-02

	Compensation.	
52.222-6	Construction Wage Rate Requirements.	2026-02
52.222-8	Payrolls and Basic Records.	2026-02
52.222-10	Compliance with Copeland Act Requirements.	2026-02
52.222-11	Subcontracts (Labor Standards).	2026-02
52.222-12	Contract Termination-Debarment.	2014-05
52.222-13	Compliance with Construction Wage Rate Requirements and Related Regulations.	2014-05
52.222-14	Disputes Concerning Labor Standards.	2026-02
52.222-15	Certification of Eligibility.	2014-05
52.222-35	Equal Opportunity for Veterans.	2026-02
52.222-36	Equal Opportunity for Workers with Disabilities. (Deviation)	2026-02
52.222-37	Employment Reports on Veterans.	2026-02
52.222-40	Notification of Employee Rights Under the National Labor Relations Act.	2010-12
52.222-50	Combating Trafficking in Persons.	2026-02
52.222-54	Employment Eligibility Verification.	2025-01

52.222-55	Minimum Wages for Contractor Workers Under Executive Order 14026. (Deviation 2026-O0038)	2026-02
52.222-62	Paid Sick Leave Under Executive Order 13706. (Deviation 2026-O0038)	2026-02
52.223-5	Pollution Prevention and Right-to-Know Information.	2024-05
52.226-7	Drug-Free Workplace.	2024-05
52.226-8	Encouraging Contractor Policies to Ban Text Messaging While Driving.	2024-05
52.227-1	Authorization and Consent.	2020-06
52.227-4	Patent Indemnity-Construction Contracts.	2007-12
52.228-2	Additional Bond Security.	1997-10
52.228-5	Insurance-Work on a Government Installation.	1997-01
52.228-11	Individual Surety-Pledge of Assets.	2021-02
52.228-12	Prospective Subcontractor Requests for Bonds.	2022-12
52.228-14	Irrevocable Letter of Credit.	2014-11
52.228-15	Performance and Payment Bonds-Construction.	2020-06
52.228-17	Individual Surety-Pledge of Assets (Bid Guarantee).	2021-02

52.229-3	Federal, State, and Local Taxes.	2013-02
52.232-8	Discounts for Prompt Payment.	2002-02
52.232-17	Interest.	2014-05
52.232-23	Assignment of Claims.	2014-05
52.232-27	Prompt Payment for Construction Contracts.	2017-01
52.232-33	Payment by Electronic Funds Transfer-System for Award Management.	2018-10
52.232-39	Unenforceability of Unauthorized Obligations.	2013-06
52.232-40	Providing Accelerated Payments to Small Business Subcontractors.	2023-03
52.233-1	Disputes.	2026-02
52.233-3	Protest after Award.	2026-02
52.233-4	Applicable Law for Breach of Contract Claim.	2026-02
52.236-2	Differing Site Conditions. (Deviation)	2026-02
52.236-3	Site Investigation and Conditions Affecting the Work. (Deviation)	2026-02
52.236-5	Material and Workmanship.	2026-02
52.236-6	Superintendence by the Contractor. (Deviation)	2026-02

52.236-7	Permits and Responsibilities.	2026-02		
52.236-8	Other Contracts.	2026-02		
52.236-9	Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements.	2026-02		
52.236-10	Operations and Storage Areas.	2026-02		
52.236-11	Use and Possession Prior to Completion. (Deviation 2026-O0038)	2026-02		
52.236-12	Cleaning Up. (Deviation 2026-O0038)	2026-02		
52.236-13	Accident Prevention. (Alternate I)	2026-02	Alternate I	1991-11
52.236-15	Schedules for Construction Contracts.	2026-02		
52.236-21	Specifications and Drawings for Construction.	2026-02		
52.242-13	Bankruptcy.	1995-07		
52.242-14	Suspension of Work.	1984-04		
52.243-4	Changes. (Deviation)	2026-02		
52.243-5	Changes and Changed Conditions.	2026-02		
52.244-6	Subcontracts for Commercial Products and Commercial Services.	2026-02		
52.246-12	Inspection of Construction.	1996-08		

52.246-21	Warranty of Construction.	1994-03
52.249-2	Termination for Convenience of the Government (Fixed-Price).	2012-04
52.249-10	Default (Fixed-Price Construction).	1984-04

DFARS Clauses Incorporated by Reference

Number	Title	Effective Date	Alternate Deviation	Variation Effective Date
252.201-7000	Contracting Officer's Representative.	1991-12		
252.203-7000	Requirements Relating to Compensation of Former DoD Officials.	2011-09		
252.203-7002	Requirement to Inform Employees of Whistleblower Rights.	2022-12		
252.204-7003	Control of Government Personnel Work Product.	1992-04		
252.204-7004	Antiterrorism Awareness Training for Contractors.	2023-01		
252.204-7018	Prohibition on the Acquisition of Covered Defense Telecommunications Equipment or Services.	2023-01		
252.204-7020	NIST SP 800-171 DoD Assessment Requirements.	2023-11		

252.223-7006	Prohibition on Storage, Treatment, and Disposal of Toxic or Hazardous Materials.	2014-09
252.223-7008	Prohibition of Hexavalent Chromium.	2023-01
252.225-7048	Export-Controlled Items.	2013-06
252.225-7056	Prohibition Regarding Business Operations with the Maduro Regime.	2023-01
252.232-7003	Electronic Submission of Payment Requests and Receiving Reports.	2018-12
252.232-7010	Levies on Contract Payments.	2006-12
252.236-7000	Modification Proposals--Price Breakdown.	1991-12
252.236-7002	Obstruction of Navigable Waterways.	1991-12
252.243-7001	Pricing of Contract Modifications.	1991-12
252.243-7002	Requests for Equitable Adjustment.	2022-12
252.244-7000	Subcontracts for Commercial Products or Commercial Services.	2023-11
252.247-7023	Transportation of Supplies by Sea.	2024-10

FAR Clauses Incorporated by Full Text

Number	Title	Effective Date	Alternate Deviation	Variation Effective Date
52.211-12	Liquidated Damages-Construction.	2000-09		

Liquidated Damages-Construction (Sept 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 $1,524.00 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)

52.219-28	Postaward Small Business Program Rerepresentation. (Deviation)	2026-02		

Postaward Small Business Program Rerepresentation (Feb 2026) (Deviation)

(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 its field of operation, and qualified as a small business under the criteria in 13 CFR part 121 and the size standard in paragraph (c) of this clause.

(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 a small business concern, a small disadvantaged business concern, or a joint venture that 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 (e) of this clause or, if applicable, paragraph (g) 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) 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.

(d) 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, or 150 employees for information technology value-added resellers under NAICS code 541519, 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.

(e) Except as provided in paragraph (g) of this clause, the Contractor shall make the representation(s) required by paragraph (b) 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 officer in writing within the timeframes specified in paragraph (b) of this clause, that the data have been validated or updated, and provide the date of the validation or update.

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

(g) If the Contractor does not have representations and certifications in 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 assigned to ____contract number.

(2) [Complete only if the Contractor represented itself as a small business concern in paragraph (g)(1) of this clause.] The Contractor represents that it [ ] is, [ ] is not, a small disadvantaged business concern as defined in 13 CFR 124.1001.

(3) Women-owned small business (WOSB) joint venture eligible under the WOSB Program. The Contractor represents that it [ ] is, [ ] is not a joint venture that complies with the requirements of 13 CFR 127.506(a) through (c). [____The Contractor shall enter the name and unique entity identifier of each party to the joint venture: __.]

(4) Economically disadvantaged women-owned small business (EDWOSB) joint venture. The Contractor represents that it [ ] is, [ ] is not a joint venture that complies with the requirements of 13 CFR 127.506(a) through (c). [____The Contractor shall enter the name and unique entity identifier of each party to the joint venture: __ .]

(5) Service-disabled veteran-owned small business (SDVOSB) joint venture eligible under the SDVOSB Program. The Contractor represents that it [ ] is, [ ] is not an SDVOSB joint venture eligible under the SDVOSB Program that complies with the requirements of 13 CFR 128.402. [____The Contractor shall enter the name and unique entity identifier of each party to the joint venture: __.]

(6) HUBZone joint venture eligible under the HUBZone Program.[Complete only if the offeror is a HUBZone small business concern.] The offeror represents, as part of its offer, that It [ ] is, [ ] is not a HUBZone joint venture that complies with the requirements of 13 CFR 126.616(a) through (c). [____The Contractor shall enter the name and unique entity identifier of each party to the joint venture: .] Each HUBZone small business concern participating in the HUBZone joint venture must be certified as a HUBZone concern. [____Contractor to sign and date and insert authorized signer's name and title.]

(End of clause)

52.225-9	Buy American-Construction Materials.	2022-10

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.

"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

(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 statute 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 statute.

(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)*	
	Item1:				
	Foreign construction material	———	———	———	
	Domestic construction material	———	———	———	
	Item2:				
	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)

52.229-11	Tax on Certain Foreign Procurements-Notice and Representation.	2020-06

Tax on Certain Foreign Procurements-Notice and Representation (Jun 2020)

(a) Definitions. As used in this provision-

Foreign person means any person other than a United States person.

Specified Federal procurement payment means any payment made pursuant to a contract with a foreign contracting party that is for goods, manufactured or produced, or services provided in a foreign country that is not a party to an international procurement agreement with the United States. For purposes of the prior sentence, a foreign country does not include an outlying area.

United States person as defined in 26 U.S.C. 7701(a)(30) means

(1) A citizen or resident of the United States;

(2) A domestic partnership;

(3) A domestic corporation;

(4) Any estate (other than a foreign estate, within the meaning of 26 U.S.C. 701(a)(31)); and

(5) Any trust if-

(i) A court within the United States is able to exercise primary supervision over the administration of the trust; and

(ii) One or more United States persons have the authority to control all substantial decisions of the trust.

(b) Unless exempted, there is a 2 percent tax of the amount of a specified Federal procurement payment on any foreign person receiving such payment. See 26 U.S.C. 5000C and its implementing regulations at 26 CFR 1.5000C-1 through 1.5000C-7.

(c) Exemptions from withholding under this provision are described at 26 CFR 1.5000C-1(d)(5) through (7). The Offeror would claim an exemption from the withholding by using the Department of the Treasury Internal Revenue Service Form W-14, Certificate of Foreign Contracting Party Receiving Federal Procurement Payments, available via the internet at www.irs.gov/w14. Any exemption claimed and self-certified on the IRS Form W-14 is subject to audit by the IRS. Any disputes regarding the imposition and collection of the 26 U.S.C. 5000C tax are adjudicated by the IRS as the 26 U.S.C. 5000C tax is a tax matter, not a contract issue. The IRS Form W-14 is provided to the acquiring agency rather than to the IRS.

(d) For purposes of withholding under 26 U.S.C. 5000C, the Offeror represents that

(1) It [ ] is [X] is not a foreign person; and

(2) If the Offeror indicates "is" in paragraph (d)(1) of this provision, then the Offeror represents that-I am claiming on the IRS Form W-14 [ ] a full exemption, or [ ] partial or no exemption [Offeror shall select one] from the excise tax.

(e) If the Offeror represents it is a foreign person in paragraph (d)(1) of this provision, then-

(1) The clause at FAR 52.229-12, Tax on Certain Foreign Procurements, will be included in any resulting contract; and

(2) The Offeror shall submit with its offer the IRS Form W-14. If the IRS Form W-14 is not submitted with the offer, exemptions will not be applied to any resulting contract and the Government will withhold a full 2 percent of each payment.

(f) If the Offeror selects "is" in paragraph (d)(1) and "partial or no exemption" in paragraph (d)(2) of this provision, the Offeror will be subject to withholding in accordance with the clause at FAR 52.229-12, Tax on Certain Foreign Procurements, in any resulting contract.

(g) A taxpayer may, for a fee, seek advice from the Internal Revenue Service (IRS) as to the proper tax treatment of a transaction. This is called a private letter ruling. Also, the IRS may publish a revenue ruling, which is an official interpretation by the IRS of the Internal Revenue Code, related statutes, tax treaties, and regulations. A revenue ruling is the conclusion of the IRS on how the law is applied to a specific set of facts. For questions relating to the interpretation of the IRS regulations go to https://www.irs.gov/help/tax-law-questions.

(End of provision)

52.232-5	Payments under Fixed-Price Construction Contracts.	2014-05

Payments under Fixed-Price Construction Contracts (May 2014)

(a) Payment of price. The Government shall pay the Contractor the contract price as provided in this contract.

(b) Progress payments. The Government shall make progress payments monthly as the work proceeds, or at more frequent intervals as determined by the Contracting Officer, on estimates of work accomplished which meets the standards of quality established under the contract, as approved by the Contracting Officer.

(1) The Contractor's request for progress payments shall include the following substantiation:

(i) An itemization of the amounts requested, related to the various elements of work required by the contract covered by the payment requested.

(ii) A listing of the amount included for work performed by each subcontractor under the contract.

(iii) A listing of the total amount of each subcontract under the contract.

(iv) A listing of the amounts previously paid to each such subcontractor under the contract.

(v) Additional supporting data in a form and detail required by the Contracting Officer.

(2) In the preparation of estimates, the Contracting Officer may authorize material delivered on the site and preparatory work done to be taken into consideration. Material delivered to the Contractor at locations other than the site also may be taken into consideration if-

(i) Consideration is specifically authorized by this contract; and

(ii) The Contractor furnishes satisfactory evidence that it has acquired title to such material and that the material will be used to perform this contract.

(c) Contractor certification. Along with each request for progress payments, the Contractor shall furnish the following certification, or payment shall not be made: (However, if the Contractor elects to delete paragraph (c)(4) from the certification, the certification is still acceptable.)

I hereby certify, to the best of my knowledge and belief, that-

(1) The amounts requested are only for performance in accordance with the specifications, terms, and conditions of the contract;

(2) All payments due to subcontractors and suppliers from previous payments received under the contract have been made, and timely payments will be made from the proceeds of the payment covered by this certification, in accordance with subcontract agreements and the requirements of Chapter 39 of Title 31, United States Code;

(3) This request for progress payments does not include any amounts which the prime contractor intends to withhold or retain from a subcontractor or supplier in accordance with the terms and conditions of the subcontract; and

(4) This certification is not to be construed as final acceptance of a subcontractor's performance.

____ (Name)

____ (Title)

____ (Date)

(d) Refund of unearned amounts. If the Contractor, after making a certified request for progress payments, discovers that a portion or all of such request constitutes a payment for performance by the Contractor that fails to conform to the specifications, terms, and conditions of this contract (hereinafter referred to as the "unearned amount"), the Contractor shall-

(1) Notify the Contracting Officer of such performance deficiency; and

(2) Be obligated to pay the Government an amount (computed by the Contracting Officer in the manner provided in paragraph (j) of this clause) equal to interest on the unearned amount from the 8 thday after the date of receipt of the unearned amount until-

(i) The date the Contractor notifies the Contracting Officer that the performance deficiency has been corrected; or

(ii) The date the Contractor reduces the amount of any subsequent certified request for progress payments by an amount equal to the unearned amount.

(e) Retainage. If the Contracting Officer finds that satisfactory progress was achieved during any period for which a progress payment is to be made, the Contracting Officer shall authorize payment to be made in full. However, if satisfactory progress has not been made, the Contracting Officer may retain a maximum of 10 percent of the amount of the payment until satisfactory progress is achieved. When the work is substantially complete, the Contracting Officer may retain from previously withheld funds and future progress payments that amount the Contracting Officer considers adequate for protection of the Government and shall release to the Contractor all the remaining withheld funds. Also, on completion and acceptance of each separate building, public work, or other division of the contract, for which the price is stated separately in the contract, payment shall be made for the completed work without retention of a percentage.

(f) Title, liability, and reservation of rights. All material and work covered by progress payments made shall, at the time of payment, become the sole property of the Government, but this shall not be construed as-

(1) Relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work; or

(2) Waiving the right of the Government to require the fulfillment of all of the terms of the

contract.

(g) Reimbursement for bond premiums. In making these progress payments, the Government shall, upon request, reimburse the Contractor for the amount of premiums paid for performance and payment bonds (including coinsurance and reinsurance agreements, when applicable) after the Contractor has furnished evidence of full payment to the surety. The retainage provisions in paragraph (e) of this clause shall not apply to that portion of progress payments attributable to bond premiums.

(h) Final payment. The Government shall pay the amount due the Contractor under this contract after-

(1) Completion and acceptance of all work;

(2) Presentation of a properly executed voucher; and

(3) Presentation of release of all claims against the Government arising by virtue of this contract, other than claims, in stated amounts, that the Contractor has specifically excepted from the operation of the release. A release may also be required of the assignee if the Contractor's claim to amounts payable under this contract has been assigned under the Assignment of Claims Act of1940 (31 U.S.C.3727 and 41 U.S.C.6305).

(i) Limitation because of undefinitized work. Notwithstanding any provision of this contract, progress payments shall not exceed 80 percent on work accomplished on undefinitized contract actions. A "contract action" is any action resulting in a contract, as defined in FAR subpart 2.1, including contract modifications for additional supplies or services, but not including contract modifications that are within the scope and under the terms of the contract, such as contract modifications issued pursuant to the Changes clause, or funding and other administrative changes.

(j) Interest computation on unearned amounts. In accordance with 31 U.S.C.3903(c)(1), the amount payable under paragraph (d)(2) of this clause shall be-

(1) Computed at the rate of average bond equivalent rates of 91-day Treasury bills auctioned at the most recent auction of such bills prior to the date the Contractor receives the unearned amount; and

(2) Deducted from the next available payment to the Contractor.

(End of clause)

52.248-3 Value Engineering-Construction. 2025-10

Value Engineering-Construction (Oct 2025)

(a) General. The Contractor is encouraged to develop, prepare, and submit value engineering change proposals (VECP's) voluntarily. The Contractor shall share in any instant contract savings realized from accepted VECP's, in accordance with paragraph (f) of this clause.

(b) Definitions. "Collateral costs," as used in this clause, means agency costs of operation, maintenance, logistic support, or Government-furnished property.

Collateral savings, as used in this clause, means those measurable net reductions resulting from a VECP in the agency's overall projected collateral costs, exclusive of acquisition savings, whether or not the acquisition cost changes.

Contractor's development and implementation costs, as used in this clause, means those costs the Contractor incurs on a VECP specifically in developing, testing, preparing, and submitting the VECP, as well as those costs the Contractor incurs to make the contractual changes required by Government acceptance of a VECP.

Government costs, as used in this clause, means those agency costs that result directly from developing and implementing the VECP, such as any net increases in the cost of testing, operations, maintenance, and logistic support. The term does not include the normal administrative costs of processing the VECP.

Instant contract savings, as used in this clause, means the estimated reduction in Contractor cost of performance resulting from acceptance of the VECP, minus allowable Contractor's development and implementation costs, including subcontractors' development and implementation costs (see paragraph (h) of this clause).

Value engineering change proposal (VECP) means a proposal that-

(1) Requires a change to this, the instant contract, to implement; and

(2) Results in reducing the contract price or estimated cost without impairing essential functions or characteristics; provided, that it does not involve a change-

(i) In deliverable end item quantities only; or

(ii) To the contract type only.

(c) VECP preparation. As a minimum, the Contractor shall include in each VECP the information described in paragraphs (c)(1) through (7) of this clause. If the proposed change is affected by contractually required configuration management or similar procedures, the instructions in those procedures relating to format, identification, and priority assignment shall govern VECP preparation. The VECP shall include the following:

(1) A description of the difference between the existing contract requirement and that proposed, the comparative advantages and disadvantages of each, a justification when an item's function or characteristics are being altered, and the effect of the change on the end item's performance.

(2) A list and analysis of the contract requirements that must be changed if the VECP is accepted, including any suggested specification revisions.

(3) A separate, detailed cost estimate for (i) the affected portions of the existing contract requirement and (ii) the VECP. The cost reduction associated with the VECP shall take into account the Contractor's allowable development and implementation costs, including any amount attributable to subcontracts under paragraph (h) of this clause.

(4) A description and estimate of costs the Government may incur in implementing the VECP, such as test and evaluation and operating and support costs.

(5) A prediction of any effects the proposed change would have on collateral costs to the agency.

(6) A statement of the time by which a contract modification accepting the VECP must be issued in order to achieve the maximum cost reduction, noting any effect on the contract completion time or delivery schedule.

(7) Identification of any previous submissions of the VECP, including the dates submitted, the

agencies and contract numbers involved, and previous Government actions, if known.

(d) Submission. The Contractor shall submit VECP's to the Resident Engineer at the worksite, with a copy to the Contracting Officer.

(e) Government action.

(1) The Contracting Officer will notify the Contractor of the status of the VECP within 45 calendar days after the contracting office receives it. If additional time is required, the Contracting Officer will notify the Contractor within the 45-day period and provide the reason for the delay and the expected date of the decision. The Government will process VECP's expeditiously; however, it will not be liable for any delay in acting upon a VECP.

(2) If the VECP is not accepted, the Contracting Officer will notify the Contractor in writing, explaining the reasons for rejection. The Contractor may withdraw any VECP, in whole or in part, at any time before it is accepted by the Government. The Contracting Officer may require that the Contractor provide written notification before undertaking significant expenditures for VECP effort.

(3) Any VECP may be accepted, in whole or in part, by the Contracting Officer's award of a modification to this contract citing this clause. The Contracting Officer may accept the VECP, even though an agreement on price reduction has not been reached, by issuing the Contractor a notice to proceed with the change. Until a notice to proceed is issued or a contract modification applies a VECP to this contract, the Contractor shall perform in accordance with the existing contract. The decision to accept or reject all or part of any VECP is a unilateral decision made solely at the discretion of the Contracting Officer.

(f) Sharing-

(1) Rates. The Government's share of savings is determined by subtracting Government costs from instant contract savings and multiplying the result by-

(i) 45 percent for fixed-price contracts; or

(ii) 75 percent for cost-reimbursement contracts.

(2) Payment. Payment of any share due the Contractor for use of a VECP on this contract shall be authorized by a modification to this contract to-

(i) Accept the VECP;

(ii) Reduce the contract price or estimated cost by the amount of instant contract savings; and

(iii) Provide the Contractor's share of savings by adding the amount calculated to the contract price or fee.

(g) Collateral savings. If a VECP is accepted, the Contracting Officer will increase the instant contract amount by 20 percent of any projected collateral savings determined to be realized in a typical year of use after subtracting any Government costs not previously offset. However, the Contractor's share of collateral savings will not exceed the contract's firm-fixed-price or estimated cost, at the time the VECP is accepted, or $100,000, whichever is greater. The Contracting Officer is the sole determiner of the amount of collateral savings.

(h) Subcontracts. The Contractor shall include an appropriate value engineering clause in any subcontract of $90,000 or more and may include one in subcontracts of lesser value. In computing any adjustment in this contract's price under paragraph (f) of this clause, the Contractor's allowable development and implementation costs shall include any subcontractor's allowable development and implementation costs clearly resulting from a VECP accepted by the Government under this contract, but shall exclude any value engineering incentive payments to a subcontractor. The Contractor may choose any arrangement for subcontractor value engineering incentive payments; provided, that these payments shall not reduce the Government's share of the savings resulting from the VECP.

(i) Data. The Contractor may restrict the Government's right to use any part of a VECP or the supporting data by marking the following legend on the affected parts:

These data, furnished under the Value Engineering-Construction clause of contract ____, shall not be disclosed outside the Government or duplicated, used, or disclosed, in whole or in part, for any purpose other than to evaluate a value engineering change proposal submitted under the clause. This restriction does not limit the Government's right to use information contained in these data if it has been obtained or is otherwise available from the Contractor or from another source without limitations.

If a VECP is accepted, the Contractor hereby grants the Government unlimited rights in the

VECP and supporting data, except that, with respect to data qualifying and submitted as limited rights technical data, the Government shall have the rights specified in the contract modification implementing the VECP and shall appropriately mark the data. (The terms "unlimited rights" and "limited rights" are defined in part 27 of the Federal Acquisition Regulation.)

(End of clause)

52.252-2	Clauses Incorporated by Reference.	1998-02

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):

FAR & RFO - www.acquisition.gov

DFARS RFO - https://www.acq.osd.mil/dpap/dars/dfars_far_overhaul_class_deviations.html

(End of clause)

52.252-6	Authorized Deviations in Clauses.	2020-11

Authorized Deviations in Clauses (Nov 2020)

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the clause.

(b) The use in this solicitation or contract of any Defense Federal Acquisition Regulation Supplement (48 CFR Chapter 2) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

(End of clause)

DFARS Clauses Incorporated by Full Text

Number	Title	Effective Date	Alternate Deviation	Variation Effective Date
252.204-7021	Contractor Compliance with the Cybersecurity Maturity Model Certification Level Requirements.	2025-11		

CONTRACTOR COMPLIANCE WITH THE CYBERSECURITY MATURITY MODEL CERTIFICATION LEVEL REQUIREMENTS (NOV 2025)

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

"Controlled unclassified information" means information the Government creates or possesses, or information an entity creates or possesses for or on behalf of the Government, that a law, regulation, or Governmentwide policy requires or permits an agency to handle using safeguarding or dissemination controls (32 CFR 2002.4(h)).

"Current" means-

(1) With regard to Conditional Cybersecurity Maturity Model Certification (CMMC) Status-

(i) Not older than 180 days for Conditional Level 2 (Self) assessments and Conditional Level 2 (certified third-party assessment organization (C3PAO)) assessments, with-

(A) No changes in compliance with the requirements at 32 CFR part 170 since the Conditional CMMC Status date (see 32 CFR 170.16 and 170.17); and

(B) A corresponding affirmation of continuous compliance by an affirming official (see 32 CFR 170.4); and

(ii) Not older than 180 days for Conditional Level 3 (Defense Industrial Base Cybersecurity Assessment Center (DIBCAC)) assessments, with-

(A) No changes in compliance with the requirements at 32 CFR part 170 since the Conditional CMMC Status date (see 32 CFR 170.18); and

(B) A corresponding affirmation of continuous compliance by an affirming official;

(2) With regard to Final CMMC Status-

(i) Not older than 1 year for Final Level 1 (Self), with-

(A) No changes in compliance with the requirements at 32 CFR part 170 since the Final CMMC Status date (see 32 CFR 170.15); and

(B) A corresponding affirmation of continuous compliance, not older than 1 year, by an affirming official;

(ii) Not older than 3 years for Final Level 2 (Self) assessments and Final Level 2 (C3PAO) assessments, with-

(A) No changes in compliance with the requirements at 32 CFR part 170 since the Final CMMC Status date (see 32 CFR 170.16 and 170.17); and

(B) A corresponding affirmation of continuous compliance, not older than 1 year, by an affirming official; and

(iii) Not older than 3 years for Final Level 3 (DIBCAC) assessments, with-

(A) No changes in compliance with the requirements at 32 CFR part 170 since the Final CMMC Status date (see 32 CFR 170.18); and

(B) A corresponding affirmation of continuous compliance, not older than 1 year, by an affirming official; and

(3) With regard to affirmation of continuous compliance (32 CFR 170.22), not older than 1 year with no changes in compliance with the requirements at 32 CFR part 170.

"Cybersecurity Maturity Model Certification (CMMC) status" means the result of meeting or exceeding the minimum required score for the corresponding assessment. The potential statuses are as follows:

(1) Final Level 1 (Self).

(2) Conditional Level 2 (Self).

(3) Final Level 2 (Self).

(4) Conditional Level 2 (C3PAO).

(5) Final Level 2 (C3PAO).

(6) Conditional Level 3 (DIBCAC).

(7) Final Level 3 (DIBCAC).

"Cybersecurity Maturity Model Certification unique identifier (CMMC UID)" means 10 alpha-numeric characters assigned to each CMMC assessment and reflected in the Supplier Performance Risk System (SPRS) for each contractor information system.

"Federal contract information (FCI)" 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. It does not include information provided by the Government to the public, such as on public websites, or simple transactional information, such as information necessary to process payments.

"Plan of action and milestones" means a document that identifies tasks to be accomplished. It details resources required to accomplish the elements of the plan, any milestones in meeting the tasks, and scheduled completion dates for the milestones, as defined in National Institute of Standards and Technology Special Publication 800-115 (32 CFR 170.21).

(b) *Framework*. The Cybersecurity Maturity Model Certification (CMMC) is a framework for assessing a contractor's compliance with applicable information security protections (see 32 CFR part 170).

(c) *Duplication*. The CMMC assessments will not duplicate efforts from any other comparable DoD assessment, except for rare circumstances when a reassessment may be necessary, for example, when there are indications of issues with cybersecurity and/or compliance with CMMC requirements.

(d) *Requirements*. The Contractor shall-

(1)(i) Have and maintain for the duration of the contract a current CMMC status at the following CMMC level, or higher: CMMC Level 1 (Self) for all information systems used in performance of the contract, task order, or delivery order that process, store, or transmit FCI or CUI; and

(ii) Consult 32 CFR 170.23 related to the flowdown of the CMMC requirements, and flow down the correct CMMC level to subcontracts and other contractual instruments;

(2) Only process, store, or transmit FCI or CUI on contractor information systems that have a CMMC status at the CMMC level required in paragraph (d)(1) of this clause, or higher;

(3) Complete on an annual basis, and maintain as current, an affirmation, by the affirming official (see 32 CFR 170.4), of continuous compliance with the requirements associated with the CMMC level required in paragraph (d)(1) of this clause in the Supplier Performance Risk System (SPRS) (*https://piee.eb.mil*) for each CMMC UID applicable to each of the contractor information systems that process, store, or transmit FCI or CUI and that are used in performance of the contract;

(4) Ensure all subcontractors and suppliers complete prior to subcontract award, and maintain on an annual basis, an affirmation, by the affirming official (see 32 CFR 170.4), of continuous compliance with the requirements associated with the CMMC level required for the

subcontract or other contractual instrument for each of the subcontractor information systems that process, store, or transmit FCI or CUI and that are used in performance of the subcontract; and

(5) If the Contractor has a CMMC Status of Conditional, successfully close out a valid plan of action and milestones (32 CFR 170.21) to achieve a CMMC Status of Final.

(e) *Reporting*. The Contractor shall-

(1) Submit to the Contracting Officer-

(i) The CMMC UID(s) issued by SPRS for contractor information systems that will process, store, or transmit FCI or CUI during performance of the contract; and

(ii) Any changes in the CMMC UIDs generated in SPRS throughout the life of the contract, task order, or delivery order, if applicable;

(2) Enter into SPRS the results of a current self-assessment for each CMMC UID, not covered by a C3PAO assessment or DIBCAC assessment, applicable to each of the contractor information systems that process, store, or transmit FCI or CUI and that are used in performance of the contract; and

(3) Complete in SPRS on an annual basis and maintain as current an affirmation of continuous compliance by the affirming official (see 32 CFR 170.4) for each self-assessment, C3PAO assessment, or DIBCAC assessment required under the contract in SPRS.

(f) *Subcontracts*. The Contractor shall-

(1) Insert the substance of this clause, including this paragraph (f) and excluding paragraph (e)(1), in subcontracts and other contractual instruments, including those for the acquisition of commercial products or commercial services, excluding commercially available off-the-shelf items, if the subcontract or other contractual instrument will contain a requirement to process, store, or transmit FCI or CUI; and

(2) Prior to awarding a subcontract or other contractual instrument, ensure that the subcontractor has a current CMMC certificate or current CMMC status at the CMMC level that is appropriate for the information that is being flowed down to the subcontractor based on the requirements at 32 CFR 170.23.

(End of clause)

252.236-7001	Contract Drawings and Specifications.	2000-08

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:

See Plans and Specifications

(End of clause)

252.236-7004	Payment for Mobilization and Demobilization.	1991-12

PAYMENT FOR MOBILIZATION AND DEMOBILIZATION (DEC 1991)

(a) The Government will pay all costs for the mobilization and demobilization of all of the Contractor's plant and equipment at the contract lump sum price for this item.

(1) <font color="#0000ff"> Sixty (60) percent of the lump sum price upon completion of the contractor's mobilization at the work site.

(2) The remaining forty (40) percent upon completion of demobilization.

(b) The Contracting Officer may require the Contractor to furnish cost data to justify this portion of the bid if the Contracting Officer believes that the percentages in paragraphs (a)(1) and (2) of this clause do not bear a reasonable relation to the cost of the work in this contract.

(1) Failure to justify such price to the satisfaction of the Contracting Officer will result in payment, as determined by the Contracting Officer, of-

(i) Actual mobilization costs at completion of mobilization;

(ii) Actual demobilization costs at completion of demobilization; and

(iii) The remainder of this item in the final payment under this contract.

(2) The Contracting Officer's determination of the actual costs in paragraph (b)(1)of this clause is not subject to appeal.

(End of clause)

Section 00 73 00 - Supplementary Conditions

NUMBER DESCRIPTION

A. CONTRACT ADMINISTRATION

B. UNAUTHORIZED INSTRUCTIONS FROM GOVERNMENT OR OTHER PERSONNEL

C. IDENTIFICATION OF EMPLOYEES

D. OTHER WORK

E. SUBMITTING PAY ESTIMATES AND PAYMENTS TO THE CONTRACTOR

F. IMPLEMENTING EQUIPMENT GUARANTEES

G. SAFEGUARDING OF INFORMATION

H. INSURANCE - WORK ON A GOVERNMENT INSTALLATION

I. PUBLIC RELEASE OF INFORMATION

J. CONTRACTOR PERFORMANCE EVALUATIONS

A. CONTRACTADMINISTRATION

This contract will be administered by:

U.S. Army Corps of Engineers, Portland District

Vancouver Resident Office

4480 SE Columbia Way,

Vancouver, WA 98661-5570

The designated Contracting Officer's Representative (COR) is

To be determined at award

Email:

Telephone:

Department of the Army, Portland District Corps of Engineers

PO Box 2946

Portland, OR 97208

(End of Requirement)

B. UNAUTHORIZED INSTRUCTIONS FROM GOVERNMENT OR OTHER PERSONNEL

The Contractor shall not accept instruction issued by any person employed by the U.S. Government or otherwise, other than the Contracting Officer or the authorized representative of the Contracting Officer acting within the limits of his authority.

(End of Requirement)

C. IDENTIFICATION OF EMPLOYEES

The Contractor shall be responsible for furnishing to each employee engaged on the work to display such identification as may be approved and directed by the Contracting Officer. 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.

(End of Requirement)

D. OTHER WORK

The Contractor shall fully cooperate with other Contractors, utility companies, and Government employees engaged in other work on and/or adjacent to the work to be performed under this contract. The Contractor shall coordinate the work herein and the use of haul roads, aggregate sources, and utilities that become a joint responsibility. Any damage resulting from the use of facilities of other Contractors shall immediately be repaired to the satisfaction of, or as directed by the Contracting Officer.

(End of Requirement)

E. SUBMITTING PAY ESTIMATES AND PAYMENTS TO THE CONTRACTOR

The Contractor shall use Engineer Form 93 (ENG 93), Payment Estimate - Contract Performance, as its request for payment. The ENG Form 93 shall be sent to the Contracting Officer's Representative for certification that the work invoiced has been performed. His mailing address for submission of the ENG Form 93 will be provided immediately upon appointment. The Contracting Officer's Representative or Administrative Contracting Officer is responsible for ensuring acceptance and approval for payment. Advance payments will not be made. The Contractor must submit the certification at FAR Clause 52.232-5, paragraph (c) along with each request for progress payments.

(End of Requirement)

F. IMPLEMENTING EQUIPMENT GUARANTEES

When the completed facility or part of a facility is accepted by the Contracting Officer, and the work includes equipment covered by a guarantee which exceeds the warranty of construction period as specified, the Contractor shall furnish the following information to the Contracting Officer:

a. A list of all items with make and model numbers.

b. A copy of manufacturer's or vendor's guarantee documents which extend beyond the warranty of construction period.

c. The date during which the Contractor's guarantee is in effect under the properly identified individual section and paragraph of the Technical Provisions each item of equipment on the list, indicating for each item the date of acceptance for the beginning of the guarantee period, either for beneficial use or final acceptance, whichever is earlier, and the expiration date of the guarantee period.

d. Name of an authorized representative of the Prime Contractor with complete address and telephone number, and the names, addresses, and telephone numbers of all subcontractors and/or equipment suppliers or manufacturers specifically designated in writing by the Prime Contractor for direct contact by the United States Army Corps of Engineers for implementing the guarantee after transfer of the equipment.

(End of Requirement)

G. SAFEGUARDING OF INFORMATION

The personnel employed on this contract may, in the performance of their assigned duties, have access to data and information pertaining to location of goods, supplies, parts, equipment, and vehicles.

Knowledge of this nature is considered restricted security information. This information shall be protected and safeguarded against disclosure to any unauthorized person or party and shall be furnished or used on an official "need to know" basis only. Safeguarding of information is extended to dependents and guests of employees who may, in any manner, obtain any of the above-specified knowledge.

(End of Requirement)

H. INSURANCE - WORK ON A GOVERNMENT INSTALLATION

a. The Contractor shall, at its own expense, provide and maintain during the entire performance period of this contract, at least the kinds and minimum amounts of insurance required by this Clause as follows:

TYPE	AMOUNT

1) Workman's Compensation and Employer's Liability (including Federal Longshoremen . and Harbor Worker's Insurance)	As legally required by the State wherein the work is being performed.
2) Comprehensive General Liability Insurance	Personal Injury Liability: $1 million per person $1 million per occurrence Property Damage (may be included in general aggregate limits or combined single unit coverage): $1 million per occurrence
3) Automobile Liability	Personal Injury Liability: $1 million per person $1 million per occurrence Property Damage (may be included in general aggregate limits or combined single unit coverage): $1 million per occurrence

4) If single general aggregate limits or combined single unit coverage is obtained for General Liability and/or Automobile Liability coverage, minimum amounts shall be the sum of the personal injury and property damage coverage required above. Umbrella Form Excess Liability insurance coverage shall be added to general liability and automobile liability coverage to determine if minimum insurance limits are met.

5) If work is to be performed in railroad right-of-way, see paragraph titled ADDITIONAL REQUIREMENTS FOR RAILROAD PROTECTION in Section 01010 of SECTION C. (THIS APPLIES TO CONSTRUCTION CONTRACTS ONLY)

b. Before commencing work under this contract, the Contractor shall certify to the Contracting Officer in writing that the required insurance has been obtained. The policies evidencing required insurance shall contain an endorsement to the effect that any cancellation or any material change adversely affecting the Government's interest shall not be effective (1) for such period as the laws of the State in which this contract is to be performed prescribe, or (2) until 30 days after the insurer or the Contractor gives written notice to the Contracting Officer, whichever period is longer.

c. The Contractor shall insert the substance of this clause, including this paragraph (c), in subcontracts under this contract that require work on a Government installation and shall require subcontractors to provide and maintain the insurance required in the Schedule or elsewhere in the contract. The Contractor shall maintain a copy of all subcontractors' proofs of required insurance, and shall make copies available to the Contracting Officer upon request.

d. "Government Installation" for this clause includes government vessels.

(End of Requirement)

I. PUBLIC RELEASE OF INFORMATION

The contractor shall coordinate with the Portland District of the U.S. Army Corps of Engineers for release of information to the public concerning this contract or any program related to this contract. This clause covers Media Relations and Printed Materials.

1. Media Relations

The contractor is permitted to speak to news media representatives in accordance with his firm's public relations policies and in conjunction with applicable U.S. government or Army Corps of Engineers' guidelines on release of information related to the specific program for which the contract was awarded. The contractor is required to inform the Portland District of significant media contacts. The contractor is encouraged to coordinate directly with Portland District's Public Affairs Officer, as necessary, when the media call is being responded to; however, this shall not preclude the contractor from responding to media requests in a timely manner. The contractor shall respond to inquiries that directly fall within his domain; he shall not speak for the Army or the Corps.

2. Printed Materials

a. The contractor shall not release to anyone outside the contractor's organization any unclassified information, regardless of medium, pertaining to this contract, unless:

i. The Portland District has given written approval, either by the Public Affairs Officer or by the Contracting Officer;

ii. Or the information is otherwise in the public domain before the date of release.

b. The contractor shall obtain approval from the Portland District prior to the dissemination of any briefings or speeches, news releases, articles, fact sheets, advertisements, or any other informational materials intended for public release that are the result of work performed or to be performed under this contract. This review is intended to insure that public release of material does not violate government policy.

c. Requests for approval shall identify the specific information to be released, the medium to be used, and the purpose for release. This material shall be submitted to the Public Affairs Officer and to the Contracting Officer at the Portland District. The contractor shall strive to provide five working days for such approvals. Materials to be released within a shorter period of time will require special handling procedures, and the contractor shall request special consideration directly to the Public Affairs Officer or to the Contracting Officer.

d. The Contractor agrees to include a similar requirement in each subcontract under this contract. Subcontractors shall submit requests for authorization to release through the prime contractor to the government (the Public Affairs Officer and the Contracting Officer), assuring the government that the prime contractor is knowledgeable of the action and concurs.

Nothing in the foregoing section on public release of information shall affect compliance with the clause of the contract entitled, "Security Requirements."

(End of Requirement)

J. CONTRACTOR PERFORMANCE EVALUATIONS

In accordance with Engineering Regulation 415-1-17, Construction Contractor Performance Evaluations, dated 24 January 2012, It is USACE policy that the Procuring Contracting Officer (PCO), or designated representative of the construction office responsible for monitoring contractor performance, will evaluate construction contractor's performance and prepare a performance evaluation report in the Contractor Performance Assessment Reporting System (CPARS). The Contractor shall be briefed of the CPARS process at the time of the Preconstruction Conference.

(End of Requirement)

SPECIAL CONTRACT REQUIREMENTS LANGUAGE

Contractors are expected to comply with the provision/clause requirement and, when required, to properly complete and return the IRS Form W-14 at proposal submission, and with each pay application. The Contracting Officer will remove the clause (and SCR) from a resultant award when the offeror represents that is not a foreign person, in response to the certification/representation at FAR 52.229-11. At this time, the tax amount due for each withholding will be confirmed by USACE, BUT WILL NOT BE WITHHELD from the payment. It is the contractor's responsibility to set aside, or remit to the IRS, the amount confirmed by USACE. Whether the contractor sets the money aside for future payment to the IRS or makes payment to the IRS, it is at the contractor's discretion, based on its analysis of the regulations regarding the excise tax.

(End of Requirement)

*** END OF NARRATIVE ***

Overall Contract Inspection/Acceptance Locations

0001	Inspection and Acceptance Location Both Destination Instructions: In accordance with the Statement of Work DoDAAC: W9127N CountryCode: USA W071 ENDIST PORTLAND 333 SW FIRST AVE, PORTLAND OR 97204-3495 PORTLAND, OR 97204-3495 UNITED STATES
0002	Inspection and Acceptance Location Both Destination Instructions: In accordance with the Statement of Work DoDAAC: W9127N CountryCode: USA W071 ENDIST PORTLAND 333 SW FIRST AVE, PORTLAND OR 97204-3495 PORTLAND, OR 97204-3495 UNITED STATES
0003	Inspection and Acceptance Location Both Destination Instructions: In accordance with the Statement of Work DoDAAC: W9127N CountryCode: USA

	W071 ENDIST PORTLAND 333 SW FIRST AVE, PORTLAND OR 97204-3495 PORTLAND, OR 97204-3495 UNITED STATES
0004	Inspection and Acceptance Location Both Destination Instructions: In accordance with the Statement of Work DoDAAC: W9127N CountryCode: USA W071 ENDIST PORTLAND 333 SW FIRST AVE, PORTLAND OR 97204-3495 PORTLAND, OR 97204-3495 UNITED STATES
0005	Inspection and Acceptance Location Both Destination Instructions: In accordance with the Statement of Work DoDAAC: W9127N CountryCode: USA W071 ENDIST PORTLAND 333 SW FIRST AVE, PORTLAND OR 97204-3495 PORTLAND, OR 97204-3495 UNITED STATES
0006	Inspection and Acceptance Location Both Destination Instructions: In accordance with the Statement of Work

	DoDAAC: W9127N CountryCode: USA W071 ENDIST PORTLAND 333 SW FIRST AVE, PORTLAND OR 97204-3495 PORTLAND, OR 97204-3495 UNITED STATES
Option Line Item 0007	Inspection and Acceptance Location Both Destination Instructions: In accordance with the Statement of Work DoDAAC: W9127N CountryCode: USA W071 ENDIST PORTLAND 333 SW FIRST AVE, PORTLAND OR 97204-3495 PORTLAND, OR 97204-3495 UNITED STATES
Option Line Item 0008	Inspection and Acceptance Location Both Destination Instructions: In accordance with the Statement of Work DoDAAC: W9127N CountryCode: USA W071 ENDIST PORTLAND 333 SW FIRST AVE, PORTLAND OR 97204-3495 PORTLAND, OR 97204-3495 UNITED STATES
Option Line Item	Inspection and Acceptance Location

0009	Both Destination Instructions: In accordance with the Statement of Work DoDAAC: W9127N CountryCode: USA W071 ENDIST PORTLAND 333 SW FIRST AVE, PORTLAND OR 97204-3495 PORTLAND, OR 97204-3495 UNITED STATES
Option Line Item 0010	Inspection and Acceptance Location Both Destination Instructions: In accordance with Statement of Work DoDAAC: W9127N CountryCode: USA W071 ENDIST PORTLAND 333 SW FIRST AVE, PORTLAND OR 97204-3495 PORTLAND, OR 97204-3495 UNITED STATES
Option Line Item 0011	Inspection and Acceptance Location Both Destination Instructions: In accordance with Statement of Work DoDAAC: W9127N CountryCode: USA W071 ENDIST PORTLAND 333 SW FIRST AVE, PORTLAND OR 97204-3495 PORTLAND, OR 97204-3495 UNITED STATES

Option Line Item 0012	Inspection and Acceptance Location Both Destination Instructions: In accordance with Statement of Work DoDAAC: W9127N CountryCode: USA W071 ENDIST PORTLAND 333 SW FIRST AVE, PORTLAND OR 97204-3495 PORTLAND, OR 97204-3495 UNITED STATES
Option Line Item 0013	Inspection and Acceptance Location Both Destination Instructions: In accordance with the Statement of Work DoDAAC: W9127N CountryCode: USA W071 ENDIST PORTLAND 333 SW FIRST AVE, PORTLAND OR 97204-3495 PORTLAND, OR 97204-3495 UNITED STATES
Option Line Item 0014	Inspection and Acceptance Location Both Destination Instructions: In accordance with the Statement of Work DoDAAC: W9127N CountryCode: USA W071 ENDIST PORTLAND 333 SW FIRST AVE, PORTLAND OR 97204-3495 PORTLAND, OR 97204-3495

	UNITED STATES
Option Line Item 0015	Inspection and Acceptance Location Both Destination Instructions: In accordance with the Statement of Work DoDAAC: W9127N CountryCode: USA W071 ENDIST PORTLAND 333 SW FIRST AVE, PORTLAND OR 97204-3495 PORTLAND, OR 97204-3495 UNITED STATES
Option Line Item 0016	Inspection and Acceptance Location Both Destination Instructions: In accordance with Statement of Work DoDAAC: W9127N CountryCode: USA W071 ENDIST PORTLAND 333 SW FIRST AVE, PORTLAND OR 97204-3495 PORTLAND, OR 97204-3495 UNITED STATES
Option Line Item 0017	Inspection and Acceptance Location Both Destination Instructions: In accordance with Statement of Work DoDAAC: W9127N CountryCode: USA

	W071 ENDIST PORTLAND 333 SW FIRST AVE, PORTLAND OR 97204-3495 PORTLAND, OR 97204-3495 UNITED STATES
Option Line Item 0018	Inspection and Acceptance Location Both Destination Instructions: In accordance with Statement of Work DoDAAC: W9127N CountryCode: USA W071 ENDIST PORTLAND 333 SW FIRST AVE, PORTLAND OR 97204-3495 PORTLAND, OR 97204-3495 UNITED STATES

Overall Contract Delivery Period

FAR Clauses Incorporated by Reference

Number	Title	Effective Date	Alternate Deviation	Variation Effective Date
52.247-34	F.o.b. Destination.	1991-01		

Section 01 00 00 - General Requirements

Requirements

Removal, refurbishment, and replacement of major components of Fish Pump Units 1 and 2, including but not limited to shafts, bearings, bearing brackets, and right-angle drive gearboxes. Magnitude of Construction: Between $1,000,000 and $5,000,000 NAICS: 237990 Other Heavy and Civil Engineering Construction Size Standard: $45,000,000 Socio-Economic Considerations: Total Small Business Set-Aside

PROJECT TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

01 10 00.00 25 CONTRACT ADMINISTRATION DATA
01 10 10.00 25 CONTRACTOR'S OPERATIONS AND REQUIREMENTS
01 11 00.00 25 SUMMARY OF WORK
01 12 00.00 25 SECURITY REQUIREMENTS
01 22 00.00 25 MEASUREMENT AND PAYMENT
01 32 01.00 25 PROJECT SCHEDULE
01 33 00 SUBMITTAL PROCEDURES
01 35 26.00 25 GOVERNMENTAL SAFETY REQUIREMENTS
01 42 00 SOURCES FOR REFERENCE PUBLICATIONS
01 45 00.00 25 QUALITY CONTROL
01 45 00.15 25 RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE (RMS CM)
01 57 19.00 25 TEMPORARY ENVIRONMENTAL CONTROLS
01 74 19.00 25 CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL
01 78 23.00 25 OPERATION AND MAINTENANCE DATA
01 78 39.00 25 PROJECT RECORD DOCUMENTS

DIVISION 05 - METALS

05 50 14.00 25 METAL FABRICATIONS

DIVISION 09 - FINISHES

09 97 02.00 25 PAINTING

DIVISION 15 -

15 00 00.02 25 FISHWATER PUMP GEARBOX
15 00 00.03 25 FISHWATER PUMP REHABILITATION

DIVISION 35 - WATERWAY AND MARINE CONSTRUCTION

35 05 40.17 25 SELF-LUBRICATED MATERIALS, FABRICATION, HANDLING, AND ASSEMBLY

-- End of Project Table of Contents --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 10 00.00 25

CONTRACT ADMINISTRATION DATA

PART 1 GENERAL

1.1 REFERENCES
1.2 SUBMITTALS
1.3 MEANING OF TERMS
1.4 CONTRACTING OFFICER
1.5 SERIAL LETTER CORRESPONDENCE
1.5.1 Numbering
1.5.2 Subcontractors
1.5.3 Transmittals
1.6 EM 385-1-1 SAFETY AND HEALTH REQUIREMENTS MANUAL
1.7 PROJECT-SPECIFIC MANAGEMENT PLAN
1.8 LETTERS OF AUTHORITY
1.9 LABOR STANDARDS
1.9.1 Coverage
1.9.2 Wages
1.9.3 Overtime
1.9.4 Deductions
1.9.5 Apprentices
1.9.6 Payrolls
1.9.7 Supply and Use of Electronic Software for Processing Wage Rate Requirements
1.9.8 Records
1.9.9 Job Interviews
1.10 VETERANS EMPLOYMENT EMPHASIS FOR U.S. ARMY CORPS OF ENGINEERS CONTRACTS
1.11 PARTNERING
1.12 PARTNERING
1.13 FACILITY TURNOVER PLANNING MEETINGS (Red Zone Meetings)
1.13.1 Red Zone Checklist
1.13.2 Meetings
1.14 LIMITATIONS ON SUBCONTRACTING COMPLIANCE
1.15 EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE
1.16 BASIS FOR SETTLEMENT OF PROPOSALS

PART 2 PRODUCTS

PART 3 EXECUTION

-- End of Section Table of Contents --

SECTION 01 10 00.00 25

CONTRACT ADMINISTRATION DATA

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 in the text by basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2024) Safety -- Safety and Occupational Health (SOH) Requirements
EP 1110-1-8	(2021) Engineering and Design -- Construction Equipment Ownership and Operating Expense Schedule

U.S. DEPARTMENT OF LABOR

29 CFR 5.5	Contract Provisions and Related Matters

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-11 Closeout Submittals

Limitations On Subcontracting Compliance

1.3 MEANING OF TERMS

a. Specification Sections of this Contract are generally written in the imperative mood. In sentences using the imperative mood, the subject, "the Contractor," is implied. Also implied in this language are "shall," "shall be," "must," or similar words and phrases. In material specifications, the subject may also be the supplier, fabricator, or manufacturer supplying material, products, or equipment for use on the project.

b. Wherever "directed," "required," "prescribed," or other similar words are used, the "direction," "requirement," or "order" of the Contracting Officer (CO) is intended. Similarly, wherever "approved," "acceptable," "suitable," "satisfactory," or similar words are used, the words mean "approved by," "acceptable to," or "satisfactory to" the CO.

c. The word "will" generally pertains to decisions or actions of the CO.

1.4 CONTRACTING OFFICER

The CO who signed this Contract is the primary CO for the Contract. Nevertheless, any CO assigned to the Portland District and acting within their authority may take formal action on this Contract when a Contract action needs to be taken and the primary CO is unavailable. All correspondence must be through the CO or, upon notification, their authorized Representative (COR).

1.5 SERIAL LETTER CORRESPONDENCE

All letters must be electronically submitted to the Government and must be sent to designated parties via email and exported via the RMS interface. All letters must be signed in accordance with the letters of authority. Send any documents requiring original hardcopy/signatures to:

Vancouver Resident Office
4480 SE Columbia Way
Vancouver, WA 98661

1.5.1 Numbering

All serial letter correspondence must be independently numbered sequentially with no numbers missing or duplicated, commencing with number one. Each letter must show the Contract number, description, and subject matter. Only one subject should be covered in the same letter.

1.5.2 Subcontractors

Subcontractors must not correspond with either the Resident or District offices; the Prime Contractor must handle all correspondence.

1.5.3 Transmittals

Transmittals of signed pay estimates, payrolls, submittals, and other similar correspondence will not require a Serial Letter.

1.6 EM 385-1-1 SAFETY AND HEALTH REQUIREMENTS MANUAL

The latest version in effect on the date of the Solicitation for this Contract (in accordance with EM 385-1-1 Paragraph 4 General, will be contractually binding as part of this Contract. The latest version, including all errata and changes, must be used for this Contract and is obtainable at https://www.publications.usace.army.mil/Portals/76/EM%20385-1-1%20_EFFECTIVE%2015March2024.pdf.

1.7 PROJECT-SPECIFIC MANAGEMENT PLAN

Submit SD-01, Preconstruction Submittals (listed on the submittal register, Attachment A1, and defined in Section 01 33 00, SUBMITTAL PROCEDURES). The listed components of the Project-Specific Management Plan (PSMP) must be submitted separately under the appropriate specifications section. Upon approval, the components must be combined into a single PSMP binder that will be kept onsite. Update the PSMP whenever the plans contained within are updated or amended. The COR will periodically review the onsite copy of the PSMP. If a current version of the PSMP is not available and up to date, site work may be stopped until deficiencies are corrected. Acceptance of the PSMP is required prior to

mobilization.

The PSMP must include:

a. Section I - Accident Prevention Program.

(1) Accident Prevention Plan (EM 385-1-1 and Section 01 35 26.00 25, GOVERNMENTAL SAFETY REQUIREMENTS).

(2) Drug-free workplace policy.

(3) Hazard Communication Program (EM 385-1-1).

(4) Activity hazard analysis (EM 385-1-1).

(5) Equipment certification.

b. Section II - Environmental Protection Plan (Section 01 57 19.00 25, TEMPORARY ENVIRONMENTAL CONTROLS).

c. Section III - Construction Quality Control System (Section 01 45 00.00 25, QUALITY CONTROL).

(1) Contractor's quality control (CQC) plan.

(2) CQC Daily Report form.

d. Project Work Plan. The following are examples:

(1) Roadway Access Agreement.

(2) Temporary electrical systems.

(3) Welder qualifications.

(4) Welding procedures.

(5) Bolt pre-tensioning procedure.

e. Construction Waste Management Plan 01 74 19.00 25 CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT

f. Schedule for Construction.

g. Submittal Register.

1.8 LETTERS OF AUTHORITY

a. To authenticate actions required under terms of this Contract, furnish a serial letter of authority to the CO and Resident Engineer that indicates the names of individual or individuals who are authorized to perform the following functions on behalf of the company:

(1) Sign progress payment estimates.

(2) Sign final payment estimate.

(3) Accept Government-furnished property (if applicable).

(4) Sign Contract modifications, supplemental agreements and consent of surety.

(5) Monitor and report on the environmental protection plan, management plan, quality control plan, and safety plan.

(6) Supervise the field activities.

(7) Sign Release of Claims.

(8) Sign Correspondence.

b. This letter of authority must bear the typewritten names and the signatures of each individual and be signed by the person whose signature appears on the final Contract. If authorities change, submit a revised serial letter.

1.9 LABOR STANDARDS

Submit a serial letter identifying the crafts and wage rates for all Prime and subcontractor employees to whom the Contract's construction wage rate requirements apply. The Government will review for conformance with the wage determination. Comply with the following labor standards, statutes, and regulations: Wage Rate Requirements (Construction); Contract Work Hours and Safety Standards Act; Copeland Act; Secretary of Labor's regulations (Parts 3 and 5, Subtitle A, Title 29, Code of Federal Regulations).

1.9.1 Coverage

Contract provisions relating to wages, overtime, payroll deductions, and other labor standards requirements cover foremen, laborers, and mechanics, including owner-operators of other than hauling equipment and other individual enterprises performing the duties of a laborer or mechanic. Bona fide owner-operators of hauling equipment, such as trucks, who are independent contractors, are not covered, and the certified payrolls, including the names of such owner-operators, need to show hours worked each day but not the rates paid and provide a notation of "owner-operator".

1.9.2 Wages

Wages must be paid at least once a week and be computed at hourly rates not less than those set forth in the Contract wage decision, as set by the Wage Rate Requirements (Construction), for the particular classifications of work performed.

1.9.3 Overtime

Pay overtime for work in excess of 40 hours in any workweek at not less than 1-1/2 times the basic rate of pay. Rates paid for fringe benefits are excluded in the computations of overtime.

1.9.4 Deductions

Deductions from wages earned may be only those that are permitted by the Copeland Act (Anti-Kickback) regulations.

1.9.5 Apprentices

Comply with the requirements of 29 CFR 5.5(a)(4)(i) with respect to apprentices.

1.9.6 Payrolls

Prepare and submit correct Weekly Payrolls, including those of subcontractors. Weekly Payrolls will be submitted via upload to the Resident Management System Contractor Module (RMS CM) Contractor Payroll feature. Incorrect and delinquent payrolls will delay processing of partial payment estimates.

1.9.7 Supply and Use of Electronic Software for Processing Wage Rate Requirements

a. Use of a commercially available electronic system to process and submit certified payrolls electronically to the Government is encouraged. The Wage Rate Requirements statute outlines the requirements for preparing, processing and providing certified labor payrolls.

b. If the Contractor utilizes an electronic payroll processing system, then the Contractor is responsible for obtaining and providing for all access, licenses, and other services required to provide for receipt, processing, certifying, electronically transmitting to the Government, and storing weekly payrolls and other data required to comply with the Wage Rate Requirements statute. The electronic payroll service must be used to prepare, process, and maintain the relevant payrolls and basic records during all work under this contract. The electronic payroll service must be capable of preserving these payrolls and related basic records for the required three years after contract completion. The Contractor must provide access, to include electronic review access by the Government, to the electronic payroll processing system used by the Contractor.

c. Provision and use of an electronic payroll processing system must meet the following basic functional criteria:

(1) commercially available;

(2) compliant with appropriate Wage Rate Requirements statute payroll provisions in the Federal Acquisition Regulation (FAR);

(3) able to accommodate the required numbers of employees for both the prime and all subcontractors planned to be employed under the contract;

(4) capable of producing electronic versions of weekly payroll data and capable of exporting weekly payroll records for uploading into the RMS CM) 3.0;

(5) demonstrated security of data and data entry rights;

(6) ability to identify erroneous entries and track the date/time of all versions of the certified Wage Rate Requirements statute payrolls submitted to the Government over the life of the contract and to make corrections prior to submission to the Government.

d. All costs incurred related to use of an electronic payroll processing service must be included in the price for the overall work under the Contract. The costs for compliance with the Wage Rate Requirements statute by using electronic payroll processing services will not be a separately bid or reimbursed item under this Contract.

1.9.8 Records

Maintain payroll and Employment Records during the course of work and for three years thereafter. They are subject to inspection by the CO and the U.S. Department of Labor.

1.9.9 Job Interviews

A Government representative will interview Contractor and subcontractor employees from time to time during working hours on the job.

1.10 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 52.222-35, FAR 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:

a. U.S. Department of Labor Veterans employment: www.va.gov/

b. Federal veteran employment information: https://www.opm.gov/fedshirevets/

c. Veterans' Employment and Training Service (VETS): https://www.dol.gov/agencies/vets/

d. Veterans Opportunity to Work (VOW) Program: http://benefits.va.gov/vow/

e. Hiring Our Heroes initiative: www.uschamberfoundation.org/hiring-our-heroes

1.11 PARTNERING

The Government intends to implement partnering principles in the administration of the contract. A formal partnering meeting will not be held, however, the Government will conduct the contract administration in accordance with this informal partnering concept and will discuss partnering at the pre-work meeting(s). Key to a successful contract is open and honest communication, effective and efficient contract performance, resolution of disputes, and a professional relationship between all project team members. The Government and Contractor working in a team environment is critical to contract execution. The Contractor is urged to bring up issues early and to work with the Government towards prompt resolution. This partnering concept does not alleviate any contract requirements.

1.12 PARTNERING

a. The Government intends to encourage the foundation of a cohesive partnership with the Contractor and its subcontractors. This partnership will be structured to draw on the strengths of each organization to identify and achieve reciprocal goals. Among the objectives are effective and efficient Contract performance and are intended to achieve completion within budget, on schedule, and in accordance with the plans and specifications; and to develop a single cooperative management team focused on the success of the project to mutual benefit of all stakeholders. This partnership will be bilateral in makeup, and participation will be totally voluntary. Any cost associated with effectuating this partnership will be agreed to by both parties, and will be shared equally with no change to the Contract price. An integral aspect of partnering is the resolution of disputes in a timely, professional, and non-adversarial manner through the use of issue clarification and problem solving. Alternate Dispute Resolution (ADR) methodologies will be encouraged in place of the more formal dispute resolution procedures. ADR will assist in promoting and maintaining an amicable working relationship to preserve the partnership. ADR is a voluntary, non-binding procedure available for use by the parties to this Contract to resolve any dispute that may arise during performance.

b. Contractor participation in partnering is mandatory, key on-site and home office management personnel will be required to attend a full day partnering session as directed by the Government with an outside facilitator. The cost of this facilitated session is anticipated to be around $5,000 and will be shared equally between the Contractor and the Government.

1.13 FACILITY TURNOVER PLANNING MEETINGS (Red Zone Meetings)

Meet with the Government to identify strategies to ensure the project is carried to expeditious closure and turnover to the Client. Start planning the turnover process at the Pre-Construction Conference meeting with a discussion of the Red Zone process and convene at regularly scheduled Red Zone Meetings beginning at approximately 75 percent of project completion. Include the following in the turnover effort:

1.13.1 Red Zone Checklist

a. The Red Zone Checklist template is Attachment A7.

b. Prior to 75 percent completion, modify the Red Zone Checklist template by adding or deleting critical activities applicable to the project and assign planned completion dates for each activity. Submit the modified Red Zone Checklist to the CO. The CO may request additional activities be added to the Red Zone Checklist at any time as necessary.

1.13.2 Meetings

a. Conduct regular Red Zone Meetings beginning at approximately 75 percent project completion, or three to six months prior to Beneficial Occupancy Date (BOD), whichever comes first.

b. The Contracting Officer will establish the frequency of the meetings, which is expected to increase as the project completion draws nearer.

At the beginning, Red Zone meetings may be every two weeks then increase to weekly towards the final month of the project.

c. Using the Red Zone Checklist as a Plan of Action and Milestones (POAM) and basis for discussion, review upcoming critical activities and strategies to ensure work is completed on time.

d. During the Red Zone Meetings discuss with the CO any upcoming activities that require Government involvement.

e. Maintain the Red Zone Checklist by documenting the actual completion dates as work is completed and update the Red Zone Checklist with revised planned completion dates as necessary to match progress. Distribute copies of the current Red Zone Checklist to attendees at each Red Zone Meeting.

1.14 LIMITATIONS ON SUBCONTRACTING COMPLIANCE

Prior to completion of the on-site construction, and not less than annually if this Contract has a period of performance greater than one year, submit evidence of compliance with FAR 52.219-14 Limitations on Subcontracting. Evidence may be completed utilizing the Limitations on Subcontracting Form. Attachment A4 is provided as an example. This form will be provided upon request in its native Microsoft Excel format from the CO. The submittal item will include self-attestation signed by someone authorized by the company to approve Contract actions that provides, at minimum, the following summary:

a. Contract Number

b. Prime Contractor Name

c. Total Current Contract Price

d. Type of Contract Set-Aside (found on the SF 1442, Block 10, under socio-economic, e.g. Small Business, 8(a) sole source, 8(a) competitive, etc.)

e. Required Participation (specified requirement within FAR 52.219-14 such as XX percent for General Construction)

f. Amount Invoiced by the Prime Contractor (to date)

g. Prime Contractor Material Cost (to date)

h. Invoiced Amount Minus Material Cost

i. Portion of Invoiced Amount for Similarly Situated Subcontractors

j. Portion of Invoiced Amount for Non-Similarly Situated Subcontractors

k. Calculated Limitation on Subcontracting Percentage which equates to "Invoiced Amount Minus Material Cost" minus "Portion of Invoiced Amount for Non-Similarly Situated Subcontractors" with that total then divided by "Total Invoiced Amount Minus Material Cost"

l. Prime Contractor's Corrective Action Plan should the calculated percentage be less then the percentage required by FAR 52.219-14

1.15 EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE

a. This special contract requirement does not apply to terminations. See FAR Part 49.

b. Allowable cost for construction and marine plant and equipment in sound workable condition owned or controlled and furnished by a contractor or subcontractor at any tier must be based on actual cost data for each piece of equipment or groups of similar serial and series for which the Government can determine both ownership and operating costs from the contractor's accounting records. When both ownership and operating costs cannot be determined for any piece of equipment or groups of similar serial or series equipment from the contractor's accounting records, costs for that equipment must be based upon the applicable provisions of EP 1110-1-8, Construction Equipment Ownership and Operating Expense Schedule, Region VIII. Working conditions must be considered to be average for determining equipment rates using the schedule unless specified otherwise by the contracting officer. For equipment not included in the schedule, rates for comparable pieces of equipment may be used or a rate may be developed using the formula provided in the schedule. For forward pricing, the schedule in effect at the time of negotiations must apply. For retroactive pricing, the schedule in effect at the time the work was performed must apply.

c. Equipment rental costs are allowable, subject to the provisions of FAR 31.105(d)(ii) and FAR 31.205-36, Rental Costs. Rates for equipment rented from an organization under common control, lease-purchase arrangements, and sale-leaseback arrangements, will be determined using the schedule, except that actual rates will be used for equipment leased from an organization under common control that has an established practice of leasing the same or similar equipment to unaffiliated lessees.

d. When actual equipment costs are proposed and the total amount of the pricing action exceeds $2,000,000, the Contracting Officer will request the Contractor to submit either certified cost or pricing data, or partial/limited data, as appropriate. The data must be submitted on Standard Form 1411, Contract Pricing Proposal Cover Sheet.

1.16 BASIS FOR SETTLEMENT OF PROPOSALS

a. Actual costs will be used to determine equipment costs for a settlement proposal submitted on the total cost basis.

b. In evaluating a termination settlement proposal using the total cost basis, the following principles will be applied to determine allowable equipment costs:

(1) Actual costs for each piece of equipment, or groups of similar serial or series equipment, need not be available in the contractor's accounting records to determine total actual equipment costs.

(2) If equipment costs have been allocated to a contract using predetermined rates, those charges will be adjusted to actual costs.

(3) Recorded job costs adjusted for unallowable expenses will be used

to determine equipment operating expenses.

(4) Ownership costs (depreciation) will be determined using the contractor's depreciation schedule (subject to the provisions of Federal Acquisition Regulation (FAR) 31.205-11).

(5) License, taxes, storage and insurance costs are normally recovered as an indirect expense and unless the contractor charges these costs directly to contracts, they will be recovered through the indirect expense rate.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 10 10.00 25

CONTRACTOR'S OPERATIONS AND REQUIREMENTS

PART 1 GENERAL

1.1 DESCRIPTION OF WORK
1.2 REFERENCES
1.3 SUBMITTALS
1.4 INCLEMENT WEATHER CONSTRUCTION
1.5 PRE-CONSTRUCTION CONFERENCE
1.6 UNIT OUTAGE WINDOWS
1.7 NOTIFICATION OF EQUIPMENT OUTAGE
1.8 UTILITY OUTAGE REQUEST AND UTILITY CONNECTION REQUEST
1.9 WEEKLY COORDINATION MEETINGS
1.10 CONTRACTOR EMPLOYEES
1.11 PAGERS
1.12 ACCESS AGREEMENTS AND WORK AREAS
1.12.1 Access Agreements
1.12.2 Work Areas
1.12.3 Employee Access and Parking
1.13 CONSTRUCTION PROJECT IDENTIFICATION SIGN
1.14 UTILITIES
1.14.1 Sanitary Facilities
1.14.2 Electrical Power
1.14.2.1 General
1.14.2.2 Temporary Electrical Wiring
1.14.3 Water
1.15 CONTRACTOR'S EQUIPMENT
1.15.1 Contractor's Planned Equipment Methods
1.15.2 Plant and Equipment List
1.15.3 Movement of Equipment by the Contractor
1.16 CONTRACTOR USE OF GOVERNMENT CRANES
1.17 CONTRACTOR SUPPLIED EQUIPMENT AND HOIST OPERATIONS
1.18 DAMAGED EQUIPMENT OR ABNORMAL CONDITIONS
1.19 USE OF EXPLOSIVES
1.20 DAILY CLEANUP AND DISPOSAL
1.21 DISPOSAL OF EQUIPMENT AND MISCELLANEOUS MATERIALS
1.22 SALVAGE
1.23 PROTECTION OF MATERIAL AND WORK
1.24 PROTECTION OF EXISTING UTILITIES
1.25 PROTECTION AND RESTORATION OF EXISTING FACILITIES
1.26 RESTORATION OF PROJECT ROADS

PART 2 PRODUCTS

PART 3 EXECUTION

-- End of Section Table of Contents --

SECTION 01 10 10.00 25

CONTRACTOR'S OPERATIONS AND REQUIREMENTS

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

This Section covers general requirements applicable to specific Contractor's operations and equipment.

1.2 REFERENCES

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

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2024) Safety -- Safety and Occupational Health (SOH) Requirements
EP 310-1-6A	(2006; 2019 Change 2) Project Operation -- Sign Standards Manual, VOL 1

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)

AASHTO LRFD	(8th Edition; 2017) Bridge Design Specifications

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Submit the following in accordance with Section 01 33 00, SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Notification Of Equipment Outage

Utility Connection Request

Access Agreements and Work Areas; G

Temporary Electrical Wiring Plan; G

Contractor's Planned Equipment Methods; G

1.4 INCLEMENT WEATHER CONSTRUCTION

Protect work areas from inclement weather, wind damage, and precipitation so that no delay in the prosecution of critical work items, or damage to Government property occurs. No time extensions will be authorized for materials, work in place, or equipment damaged due to negligence during periods of inclement weather.

1.5 PRE-CONSTRUCTION CONFERENCE

A Pre-Construction Conference will be held once Contract award is made. The Pre-Construction Conference will be scheduled by the Government. Key Contractor staff will be required to attend in person. Key personnel include, but are not limited to, Project Manager, Site Superintendent, Project Engineer, Quality Control Manager, and Site Safety Health Officer. The purpose of the Pre-Construction Conference is to establish a mutual understanding of the respective organizations and to establish a team based understanding of the quality and safety expectations for the job. The Government will develop the agenda.

1.6 UNIT OUTAGE WINDOWS

a. All work which requires a fish pump outage must be completed during the windows defined herein. The Contractor may perform onsite preparatory work prior to the window start, but may not impact the function of the equipment. The fish pump rehabilitation must be complete and the fish pump must be available for unrestricted use by the end of the unit outage window. Testing, Balancing and Commissioning must be completed within the unit outage window.

b. Unit 2 Outage Window is November 1, 2026 to November 30, 2027.

c. Unit 1 Outage Window is December 1, 2027 to November 30, 2028. Note this unit is optional. Exercise of this option will be by Contract Modification in accordance with FAR 52.217-7.

d. The Unit Outage Windows for Units 1 and 2 may be reversed to change the order of work if the Option for Unit 1 is exercised within 120 days of award. Notification of the new order of Unit Outage Windows would be provided within the first 120 days after award.

e. The Unit 3 outage window will be December 1, 2028 to January 15, 2030. Note this unit is optional. Exercise of this option will be by Contract Modification in accordance with FAR 52.217-7.

1.7 NOTIFICATION OF EQUIPMENT OUTAGE

Where an equipment outage is required to accomplish the work outlined in this Contract, notify the Government 14 days in advance. This will allow the Government to de-energize the equipment and de-water the work area for Contractor access. This requirement applies to the Fish Pumps within the scope of this Contract.

1.8 UTILITY OUTAGE REQUEST AND UTILITY CONNECTION REQUEST

a. Perform a utility locate prior to the start of excavation. Notify the CO at least two business days prior to starting excavation work. Verify and mark all utilities not shown.

b. Verify the elevations of existing piping, utilities, and any type of underground obstruction not indicated or specified to be removed but indicated in locations to be traversed by piping, ducts, and other work to be conducted or installed.

c. Schedule work to hold outages to a minimum.

d. Arrange utility outages and connections required during the prosecution of work that affect existing systems, at the convenience of the Government, and outside of regular working hours or on weekends. Contractor will not be entitled to additional payment for utility outages and connections required to be performed outside the regular work hours.

e. Requests for utility outages and connections must be made in writing to the CO at least 14 calendar days in advance of the time required. Each request must include the system involved, location involved, utilities being affected, approximate duration of outage, and the nature of work involved.

1.9 WEEKLY COORDINATION MEETINGS

Conduct weekly coordination meetings with the Government. This meeting will be used to discuss Contractor's safety, Quality Control Program, joint risk management, submittals, deficiencies, Contract administration, schedule, actual progress in the last week, and work planned in the upcoming two weeks. Any work requiring Project support or potential impacts to Project operations or maintenance must be noted. The Contractor must provide a two week look ahead, with the previous week progress, 48 hours before each weekly meeting to the Government representative. The Contractor must prepare and distribute, by e-mail, the coordination meeting agenda with a two week look ahead no later than 24 hours before each meeting. A meeting time and place will be mutually agreed upon for the same time each week. Distribute weekly coordination meeting minutes no later than the close of business the next business day.

1.10 CONTRACTOR EMPLOYEES

All employees must be capable of demonstrating adequate knowledge of tools, supplies, equipment, and techniques necessary to competently perform the work. All personnel must be fully qualified in their respective fields to render the services necessary. The Government may require the Contractor to discontinue using any employee in the performance of the work specified in this Contract if the Government determines the performance to be unsatisfactory. Contractor employees will not be permitted to bring guests, family members, or non-employees to the job site at any time.

1.11 PAGERS

All Contractor employees who perform work on-site at John Day Dam must wear a pager that is fully compatible with the Project's message/transmitting and programming system (Apollopagers Gold AL-A25 ALPHA NUMERIC PAGER Frequency 173.4875 mhz). This is a mandatory safety requirement that allows emergency notification of all persons within the Powerhouse and other work areas. No Contractor employee will be allowed to work on-Project without wearing a pager unless specifically so permitted by the CO. In the event of fire or other danger, the Control Room will notify all personnel by pager. Provide one pager for each employee, one week prior to working inside Powerhouse. The Project will program all pagers before site work begins. At the end of the onsite work, the pagers will become the property of the Government. If the pager receivers are lost, not operable, or substantially damaged through use, the Contractor must, at the Government's discretion, repair or replace the units at the Contractor's cost.

1.12 ACCESS AGREEMENTS AND WORK AREAS

1.12.1 Access Agreements

a. Submit access procedures to and from the work site after the Contractor, the CO, and the Project's Representative have coordinated and determined the most advantageous access to, and staging of, the Contractor's assets deployed to the work site.

b. The right-of-way for the work (or delivery site) and access thereto will be furnished as stated in this Paragraph subject to mutual agreement between the Contractor and the Government concerning the specific route the Contractor is to use. Such mutual agreement must be reached prior to initiation, construction, or delivery.

c. The existing access roadway and any associated access roads on the Project, must not be closed as a result of construction or delivery activities associated with this Contract unless previously coordinated and approved by the Government. Traffic delays will only be permitted in accordance with the provisions of this Section.

d. When necessary to operate on or to cross existing highways or roads, all necessary permits must be obtained from the appropriate private or public authority.

e. In accordance with FAR 52.236-13 Alt I, ACCIDENT PREVENTION - ALTERNATE I, and EM 385-1-1, flaggers, signs, lights, and/or other safeguards must be provided to safely control and direct the flow of traffic when necessary for equipment to operate on or to cross access roads, arterial roads, or highways.

f. Spillage on Project roads and state or county roads will not be permitted, and the spillage must be immediately cleaned up at the expense of the Contractor.

g. No cleated or crawler-type equipment can be operated on paved surfaces.

h. Damage to all roads caused by the Contractor's operations must be repaired to pre-existing conditions at the expense of the Contractor.

i. Photograph the existing condition of all staging areas prior to mobilization and submit all photographs in the Access Agreements submittal. Failure to properly document existing conditions will result in a Government determination of necessary repairs.

1.12.2 Work Areas

a. Drawings showing the layout of the area proposed for use must be submitted for review and approval and comply with FAR 52.236-10 OPERATIONS AND STORAGE AREAS. The drawing(s) must show the location of the principal components: offices, access roads, parking, storage facilities and disposal areas, which the Contractor proposes to construct within the designated limits.

b. Only Contractor and subcontractor parts trailers and lunch trailers may be allowed in the Contractor work areas and these must be subject to CO and Project approval. All Contractor and subcontractor trailers are required to be adequately and physically anchored to prevent overturning due to high winds. Electrical supply for Contractor

trailers is 480V, 30Amp, 3 Phase, ungrounded delta. Contractor must provide transformer. No water supply is available at the trailer area.

c. Should additional working space or lands within the Government right-of-way be required for material yards, job offices, or other purposes obtain prior Government approval in writing. When directed at any time during the progress of the work when space is needed within the right-of-way for other purposes, any part of the grounds that have been in use must be promptly vacated and cleaned up. However, it is not the intent to require the Contractor's plant or material to be removed from an area while such plant, material, or area is still being actively used.

d. The Project staff will brief the Contractor on security procedures. Any such procedures will not be the basis for claims for additional money or time. The Project areas off limits to Contractor personnel will also be designated.

1.12.3 Employee Access and Parking

Contractor's employee private vehicle parking areas must be restricted to the area as agreed upon before construction or delivery. All Contractor vehicles used for prosecuting the work must have a Contractor sign or other permanent identification and must carry the required insurance. Private vehicles not owned by the Contractor must not be used for prosecuting the work. Private vehicles of the Contractor and its employees must enter and leave the project as directed. Keep the parking areas free of litter and debris. An adequate number and size of trash receptacles must be placed in the parking areas and emptied, as necessary to avoid overflowing. Trash receptacles must be adequately secured to provide protection from the wind and animals.

1.13 CONSTRUCTION PROJECT IDENTIFICATION SIGN

Fabricate and install one construction project identification sign in accordance with EP 310-1-6A, Attachment A2, within three days of beginning site work.

1.14 UTILITIES

Provide utilities required for the performance of work under this Contract, except Government-furnished electrical power, and water as described below.

1.14.1 Sanitary Facilities

Use of the Project restroom by Contractor personnel will not be permitted. Provide portable, temporary sanitary facilities in accordance with EM 385-1-1.

1.14.2 Electrical Power

1.14.2.1 General

Use of existing 120V and 480V electrical receptacles is allowed. Take special care not to overload receptacle circuits. Contractor must be responsible for all accessories, such as extension cords, adapters, and raceways for road crossings. Extension cords must not be allowed to cross

crane rails.

1.14.2.2 Temporary Electrical Wiring

Submit a Temporary Electrical Wiring Plan for temporary electrical wiring. Install all temporary electrical wiring in accordance with EM 385-1-1 and as approved. All temporary electrical wiring must be removed prior to completion of the Contract. Include load calculations to ensure conduit capacity is not exceeded.

1.14.3 Water

Reasonable amounts of water for domestic use will be made available from existing outlets and supplies. No charge will be made for the water.

1.15 CONTRACTOR'S EQUIPMENT

1.15.1 Contractor's Planned Equipment Methods

Submit proposed methods of transportation and operation of cranes and other heavy equipment for approval prior to commencement of those operations. Submittals must include the type, size, loadings of equipment, placement of outriggers, and the proposed transportation routes and work areas to be used on the project. Operation of heavy equipment adjacent to existing structures must be avoided when possible. Testing requirements and operation of cranes and other heavy equipment must be in accordance with EM 385-1-1. All cranes, rigging, lifts, operators, vehicles, and other necessary means to move equipment or items must be Contractor-furnished as required to pursue and complete the work and must comply with EM 385-1-1.

1.15.2 Plant and Equipment List

Within seven days prior to commencing site operations, provide a complete list of all plant and equipment to be used on the job site, exclusive of shop equipment. Throughout the life of the Contract, submit an up-to-date plant and equipment list with each progress payment request. Include rented equipment as well as lease purchase or sale leaseback equipment on the lists. Initial list and the revised monthly lists must indicate dates equipment is assigned to or removed from the project; deadline dates for repairs and returned for use; dates of the most recent and planned inspections; and adequate identification or description of each item of equipment including manufacturer's name (abbreviated), model number, manufacturer's serial number, year of manufacture, and Contractor's assigned serial or record number.

1.15.3 Movement of Equipment by the Contractor

a. Unless otherwise noted, any vehicle crossing a project bridge is limited to AASHTO LRFD, HL-93 vehicle and load requirements. Submit a loading diagram for approval showing wheel loads, wheel spacing, and travel speed a minimum of 30 days prior to operating any equipment or vehicles whose loading conditions are in excess of a HL-93 vehicle. Prior coordination and approval for such loads must be obtained before proceeding. No exclusion trucks, multi-axle specialized hauling vehicles (SHV) or mobile cranes will be allowed on a bridge deck without prior review and approval. At a minimum, the loading diagram must include but not be limited to the following information:

(1) A typical section and plan view of the bridge, the position of the wheel loads and wheel spacing of the truck or crane.

(2) The GVW of the vehicle and all axle weights.

(3) For cranes, the location and weight of axles before and after counter weights are installed, all outrigger loads, required crane boom length, weight and location of center of gravity. This should also include the effects of guy lines, upper spreader and jib mast. If using a jib, show the length, weight, and location of the center of gravity.

b. Any SHV's authorized to drive on the bridge deck must have all lift axles lowered and fully engaged while the vehicle has any load. For cranes, all specialized boom trailers must be engaged until a final set up with the outriggers are made and approved.

1.16 CONTRACTOR USE OF GOVERNMENT CRANES

Powerhouse bridge crane will be made available by request and operated by the Government. The Government will also provide a rigger and signal person for the duration of the lift. Contractor must provide planned lifting requirements in weekly coordination meeting. Request for crane assistance must be finalized no less than one week in advance for non emergency lifts. All requests must be scheduled during regular project work hours. Provide 30 days notice to Government of planned use of the Powerhouse bridge crane for fish pump Unit 1 only, to permit Government to address special access considerations applicable only to Unit 1.

1.17 CONTRACTOR SUPPLIED EQUIPMENT AND HOIST OPERATIONS

a. Hoist Replacement

Replace the Existing Hoist at Elevation 168.5. Remove the existing hoist and turn over to the Government as salvage. Retain the existing jib structure. The hoist must be replaced as one of the first site activities so it can be used to lower equipment and tools to the fish pump room. The existing hoist does not have sufficient reach to be used for this purpose. Perform any functional or load testing as required by the manufacturer.

b. Hoist Features

The hoist must

(1) have a capacity of Two Ton (2,000 kg),

(2) operate on 120V and have cord long enough to reach existing outlet at all positions on the beam,

(3) include pendant control,

(4) include wire rope of sufficient length to reach the fish pump room floor (Elevation 131.67), and

(5) fit the existing jib structure. Hoist must be compatible with existing jib structure. Submit product data for Government Approval.

c. Contractor Use of Government Hoist

The Contractor may use the New Hoist to facilitate access to the Fish Pump Room. Submit personnel certification and designations in accordance with EM 385-1-1 requirements. The Government will remove the deck hatches and install handrail. Use this hoist to the maximum extent possible to minimize use of the bridge crane. Calculate the weight of all loads estimated to be in excess of 2,000 lbs to ensure the hoist and jib are not overloaded.

1.18 DAMAGED EQUIPMENT OR ABNORMAL CONDITIONS

Inform the CO immediately upon finding any damaged equipment or other abnormal conditions involving additional work in which the Contractor believes it has no responsibility. The failure or abnormality must not be disturbed until witnessed by the CO. Prior to proceeding further with work, the Contractor and the Government must agree in writing as to the responsibility for the damage or abnormality. Any damage or abnormal conditions not reported as specified above must also be corrected.

1.19 USE OF EXPLOSIVES

Use of explosives will not be permitted.

1.20 DAILY CLEANUP AND DISPOSAL

Keep all work areas reasonably neat on a daily basis. Collect, remove, and dispose of all debris resulting from the work, such as waste metalwork, packing cases, scrap lumber, and other debris off-site at least once per week. Do not use the Government's trash cans, dump boxes, and other containers. Do not dispose of liquid waste in Project drains. All costs of removing debris must be incidental to the work and therefore no separate payment will be made.

1.21 DISPOSAL OF EQUIPMENT AND MISCELLANEOUS MATERIALS

Title to all materials and equipment to be disposed of, excepting materials salvaged for the Government, will be vested in the Contractor when beginning disassembly work or when such materials and equipment are designated as scrap. The Government will not be responsible for the condition, loss, or damage to such property after title transfer. The Contractor may retain these items in usable form and take possession of them providing that there is no subsequent cost or inconvenience to the Government. The Government does not guarantee that these items are complete or in working order and the Contractor must assume responsibility for any damages caused by their use immediately upon taking possession of them.

1.22 SALVAGE

Some items will remain the property of the Government during the Contract and after completion. Salvage must include removal of the material, equipment, etc., from its present location and transporting, bundling, protecting, cleaning, and storing it on-site as directed. Salvage items will be those specified. Maintain property control records for material or equipment designated as salvage. Contractor's system of property control may be used if approved by the CO. Contractor must be responsible for the storage and protection of all salvaged materials and equipment and must replace all salvage materials and equipment which are stolen, broken,

or damaged during the salvage operations as the result of the Contractor's negligence or while in the Contractor's care. The following items must be salvaged: Removed gearbox.

1.23 PROTECTION OF MATERIAL AND WORK

All materials, supplies, tools, equipment and Government property (including all tools, equipment, and special devices supplied by the Contractor and to be turned over to the Government at the end of the Contract) must at all times be protected and preserved in an approved manner. If material, equipment, supplies, and work performed are not adequately protected, such property may be protected by the Government and the cost thereof will be charged to the Contractor or deducted from any payment due.

1.24 PROTECTION OF EXISTING UTILITIES

Protect existing utilities in accordance with FAR 52.236-9, PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS. Repairs must be made immediately and at Contractor's expense.

1.25 PROTECTION AND RESTORATION OF EXISTING FACILITIES

Protect all existing facilities whether or not shown on the drawings or referenced in the specifications. Leave all the existing facilities, not included as a portion of the work, in a condition equal to the original condition prior to the Contract upon completion of work. Costs for repair and restoration of any facilities must be considered to be incidental to the work and included in the Contract price.

1.26 RESTORATION OF PROJECT ROADS

Project roads used for construction access will be evaluated and must be restored to their original condition by the Contractor as required. Repair and restoration must be made at the expense of the Contractor.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 11 00.00 25

SUMMARY OF WORK

PART 1 GENERAL

1.1 SUMMARY
1.2 WORK COVERED BY CONTRACT DOCUMENTS
1.2.1 Project Description
1.2.2 Location
1.3 CONTRACT DRAWINGS
1.4 OCCUPANCY OF PREMISES
1.5 EXISTING WORK

PART 2 PRODUCTS

PART 3 EXECUTION

-- End of Section Table of Contents --

SECTION 01 11 00.00 25

SUMMARY OF WORK

PART 1 GENERAL

1.1 SUMMARY

This Section provides a summary of the various Contract work elements and their relationship to each other. This summary describes work activities within interim construction completion dates. This Section does not provide the technical detail for particular work activities, but describes the work as a whole, providing overall perspective to the separate tasks and their interrelationships. Use this Section in conjunction with all the Specification Sections and the Drawings to establish the total work requirements.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

1.2.1 Project Description

The work includes mechanical work to furnish, install, and align the Unit 2 fishwater pump gearbox, the rehabilitation of the Unit 2 fishwater pump and incidental related work. Similar work on Unit 1 and Unit 3 is optional. This effort is to include all associated works required and described within this Contract package.

1.2.2 Location

The work site is located at John Day Dam. Contractor access to the work site will be from Interstate 84 exit 109.

1.3 CONTRACT DRAWINGS

a. The Drawings that accompany these Specifications are a part thereof.

b. Immediately check furnished drawings, maps, and specifications and notify the Government of any discrepancies.

1.4 OCCUPANCY OF PREMISES

Building(s) will be occupied during performance of work under this Contract. Occupancy notifications will be posted in a prominent location in the work area.

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 portion of the existing work to remain.

b. Upon completion of the work, repair or replace portions of existing work, which have been damaged by Contractor's operations, to Preconstruction conditions at the expense of the Contractor.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 12 00.00 25

SECURITY REQUIREMENTS

PART 1 GENERAL

1.1 DESCRIPTION OF WORK
1.2 SUBMITTALS
1.3 GENERAL SECURITY REQUIREMENTS AND GUIDANCE (ATOPSEC 1)
1.4 ANTITERRORISM (AT) LEVEL I TRAINING (ATOPSEC 2)
1.5 PHYSICAL SECURITY AND ACCESS CONTROL REQUIREMENTS (ATOPSEC 3)
1.6 SUSPICIOUS ACTIVITY REPORTING TRAINING (ATOPSEC 6)
1.7 ESCORTING IN CLASSIFIED AND SENSITIVE AREAS (ATOPSEC 13)
1.8 PRE-SCREEN CANDIDATES USING E-VERIFY PROGRAM (ATOPSEC 14)
1.9 UNESCORTED POWERHOUSE ACCESS
1.9.1 Seven Year Criminal Background Check
1.9.2 NERC Critical Infrastructure Protection (CIP) Training
1.9.3 Quarterly NERC CIP Security Awareness Program
1.9.4 Personnel Requiring Electronic Access to Cyber Assets (NERC)
1.10 NON-US CITIZENS

PART 2 PRODUCTS

PART 3 EXECUTION

-- End of Section Table of Contents --

SECTION 01 12 00.00 25

SECURITY REQUIREMENTS

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

This Section covers general requirements applicable to Antiterrorism and Operations Security (ATOPSEC) requirements to the Contract. Costs associated with the following execution of requirements must be at the expense of the Contractor.

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Submit the following in accordance with Section 01 33 00, SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Antiterrorism (At) Level I Training

Suspicious Activity Reporting Training

Pre-Screen Candidates Using E-Verify Program

Non-Us Citizens

1.3 GENERAL SECURITY REQUIREMENTS AND GUIDANCE (ATOPSEC 1)

a. Complete initial training within 30 days of Notice To Proceed (NTP) or the date new contract personnel begin performance on the Contract. Submit documentation to the Government that includes the names of contract personnel trained and which training they completed within five business days from the completion of training. Maintain training records. Contractor personnel and vehicles are subject to search when entering Federal installations. Comply with Force Protection Condition (FPCON) measures, Random Antiterrorism Measures (commonly referred to as “RAMs”), and Health Protection Condition (HPCON) measures.

b. Arrangement and scheduling of working hours and crews must be coordinated through the CO with the Project Staff. The working hours of the Project Staff are Mondays through Thursdays from 6:30 a.m. until 5:00 p.m. Fridays are non-working days. Working hours that extend past 5:00 p.m. weekdays or on weekends and holidays must be coordinated through the CO. Submit the intended working hours of staff on site and identify any employees working in any capacity in accordance with Subparagraph IDENTIFICATION OF EMPLOYEES.

c. Security of the Contractor's property and items furnished under this Contract, until the Government accepts items, are the Contractor's responsibility.

d. All Contractor personnel, subcontractor personnel, suppliers, etc. must comply with the posted rules.

e. Salespersons, personnel seeking employment, and personal visitors are not authorized to enter non-public areas of the Project.

f. Signs may be erected outside the project containing instructions for personnel seeking the Contractor. The content and location of the signs will be approved by the CO prior to erection. Posts or other means of support, if required, must be provided by the Contractor and removed when the Contract is completed. Any open post holes must be suitably backfilled, prior to the end of the shift in which posts are removed, and any other damage must be repaired to preconstruction conditions.

g. Prepare an organizational chart and revise whatever organizational changes occur. Maintain a complete organizational chart of all positions that will be working on the project.

1.4 ANTITERRORISM (AT) LEVEL I TRAINING (ATOPSEC 2)

All contract personnel must complete initial and annual refresher AT Level I awareness training. Online AT Level I awareness training is available at https://jko.jten.mil/ (website subject to change).

1.5 PHYSICAL SECURITY AND ACCESS CONTROL REQUIREMENTS (ATOPSEC 3)

a. All Contract personnel requiring physical access to a Federal facility must comply with the access control procedures of that location. Contract personnel requiring unescorted access to meet contract performance requirements on a Federal facility must provide a seven-year criminal background check. All costs associated with obtaining the criminal background report will be at the expense of the Contractor. The Project Reliability Compliance Coordinator (RCC) or Security Specialist will review the report, and will approve, disapprove, or revoke authorization for unescorted access based on the findings of the report. Base the report on a positive ID match using Social Security Number or fingerprints, and include all of the following:

(1) State and county check for the current residence, regardless of duration, and for each jurisdiction where the subject has lived or worked for six months or longer during the seven years immediately preceding the investigation.

(2) A search of Federal criminal records, a national crime index search of all US states and territories, and (where possible) an Office of Foreign Assets Control (OFAC) search for terrorists, narcotics traffickers, and blocked persons.

(3) For Contracts extending beyond seven years, the seven year criminal background check must be updated at least once every seven years for personnel requiring unescorted access to Powerhouses or other areas subject to NERC CIP regulations.

b. Contract personnel who are not approved for unescorted access to Federal facilities must be escorted. The Government is unable to escort Contractor personnel. One individual working for the prime contractor can request a tier 1 background check from the Government. Once approved, that individual can escort contract personnel.

c. Submit a complete, dated and signed, list of all Contractor and subcontractor personnel and their titles who will be working on the project at the Weekly Coordination Meeting. This listing must be revised and resubmitted when personnel changes occur.

d. Issuance of Government prescribed keys and cards. Each person requiring access for this Contract must obtain Government-prescribed ID/access cards (and keys if applicable) from the Project security office. Submit a Project-approved access request form and all accompanying documents not less than one week prior to the date when access is needed for any employee requiring access. For Contracts requiring access for more than 10 employees starting in the same week, provide all documents not less than two weeks prior to the date when access is required.

e. Return of Government prescribed keys and cards:

(1) Notify the Project security office immediately in the event of a termination for cause, reassignment, or a lost or stolen security item.

(2) Return all Government-prescribed cards/keys to the Project Security Office within 24 hours of personnel changes and within seven days of the final construction physical completion or termination of Contract. Failure to return any Government-prescribed cards or keys will result in a per item charge to the Contractor as defined below and may delay final payment. These fees will be deducted from the Contractor's progress payment.

(a) Physical Key: $5,000

(b) Multi-Dam Physical Key: $25,000

(c) Proximity Card: $200

f. Personnel Identity Verification (PIV) - All personnel, including visitors, must provide a valid Government-issued photo ID prior to being granted access to non-public areas. Driver licenses that do not comply with the REAL ID Act of 2005 cannot be used as the sole source for identity proofing, and a second form of Government issued photo ID will be required.

g. Personally Identifiable Information (PII) - Encrypt or password protect all transmissions containing PII must be encrypted or the document(s) containing PII must be encrypted or password protected. Send all documents containing PII directly to the Project Reliability Compliance Coordinator (RCC) and/or Security Specialist only. Upon request, DoD Safe links can be sent to the Contractor for the upload of documents.

1.6 SUSPICIOUS ACTIVITY REPORTING TRAINING (ATOPSEC 6)

All Contract personnel must complete initial and annual refresher training. The training video is one minute in duration. (Army Video: https://www.dvidshub.net/video/872410/iwatch-army-timely-threat-reporting-59sec or Department of Homeland Security Video: https://www.dhs.gov/medialibrary/assets/video/53369).

1.7 ESCORTING IN CLASSIFIED AND SENSITIVE AREAS (ATOPSEC 13)

In accordance with applicable regulations, all Contract personnel who do not possess the appropriate security clearance or access privileges will be escorted in areas where they may be exposed to sensitive information or activities, or restricted areas.

1.8 PRE-SCREEN CANDIDATES USING E-VERIFY PROGRAM (ATOPSEC 14)

Comply with the requirements set forth in FAR 52.222-54 Employment Eligibility Verification and FAR Subpart 22.18 in using the E-Verify Program at https://www.e-verify.gov/ 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). Submit an initial list of verified/eligible candidates to the CO no later than 30 business days after NTP.

1.9 UNESCORTED POWERHOUSE ACCESS

Powerhouses, security badging, and security monitoring areas are subject to additional security requirements, including those in North American Electric Reliability Corporation Critical Infrastructure Protection (NERC CIP)-004, Personnel and Training. The following additional requirements apply where unescorted access to any of these areas is required. Documents specified below must be submitted along with the Project approved access request forms, not less than one week before the date when access is required. If unescorted access to these areas is required, the access request will not be processed until all required documentation has been provided.

1.9.1 Seven Year Criminal Background Check

a. For each person requiring unescorted access to the Powerhouse or to designated security areas, provide a seven-year criminal background check. All costs associated with obtaining the criminal background report will be at the expense of the Contractor. The Project RCC or Security Specialist will review the report, and project management will approve, disapprove, or revoke authorization for unescorted access based on the findings of the report.

b. Base the report on a positive ID match using Social Security Number or fingerprints, and include all of the following:

(1) State and county check for the current residence, regardless of duration, and for each jurisdiction where the subject has lived or worked for six months or longer during the seven years immediately preceding the investigation.

(2) A search of Federal criminal records, a national crime index search of all US states and territories, and (where possible) an Office of Foreign Assets Control (OFAC) search for terrorists, narcotics traffickers, and blocked persons.

(3) For Contracts extending beyond seven years, the seven year criminal background check must be updated at least once every seven years for personnel requiring unescorted access to Powerhouses or other areas subject to NERC CIP regulations.

1.9.2 NERC Critical Infrastructure Protection (CIP) Training

Prior to being authorized for unescorted access, and annually thereafter, each person requiring unescorted access to the Powerhouse or to designated security areas must review the Government-provided NERC CIP training material, and must complete the quiz with a passing score of not less than 70 percent. The Project RCC will provide the training, curriculum, and materials. This training is estimated to take two hours per employee.

1.9.3 Quarterly NERC CIP Security Awareness Program

The Project maintains a quarterly awareness program for personnel requiring unescorted access to areas subject to NERC CIP regulations. Awareness materials will be furnished by the Project RCC, and will be distributed to Contractor personnel by the Contractor. Costs associated with the distribution of the security awareness documents are at the expense of the Contractor.

1.9.4 Personnel Requiring Electronic Access to Cyber Assets (NERC)

In addition to meeting all of the above requirements for unescorted physical access, personnel requiring electronic access to cyber assets subject to NERC CIP regulations must complete additional NERC CIP training for electronic access, must submit the Government-provided electronic access request form, and must be authorized for electronic access. Each person requiring electronic access must complete the quiz with a passing score of not less than 70 percent. The Project RCC will provide the training, curriculum, and materials. Costs associated with the execution of this training must be at the expense of the Contractor.

1.10 NON-US CITIZENS

a. Submit a scanned legible color copy of the Permanent Resident Card (if available) and passport for all personnel who are non-US citizens working on this Contract. (Note: Passports and Permanent Resident Cards both contain PII and must be protected.)

   Note: Include Visitors Nationality, Name, Title and Organization or Company name.

b. Contractor personnel who are non-US citizens will not be permitted access to the Projects until the Foreign Visitor Authorization is received from U.S. Army Corps of Engineers Headquarters. Contractor personnel who are non-US citizens will not be permitted on-site until the Foreign Visitor Authorization is approved.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 22 00.00 25

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 GENERAL INFORMATION
1.2 UNIT PRICE PAYMENT ITEMS
1.3 JOB PAYMENT ITEMS
1.4 MEASUREMENT AND PAYMENT
1.4.1 Mobilization and Demobilization (Unit 2), CLIN 0001
1.4.2 Propeller Rehabilitation (Unit 2), CLIN 0002
1.4.3 Pump Shaft, Upper and Lower Bearing parts Install and Rehabilitation (Unit 2), CLIN 0003
1.4.4 Manufacture and Delivery of New Gearbox (Unit 2), CLIN 0004
1.4.5 Installation of New Gearbox (Unit 2), CLIN 0005
1.4.6 Testing and Commissioning (Unit 2), CLIN 0006
1.4.7 Mobilization and Demobilization, Unit 1 (Optional), CLIN 0007
1.4.8 Propeller Rehabilitation, Unit 1(Optional), CLIN 0008
1.4.9 Pump Shaft, Upper and Lower Bearing parts Install and Rehabilitation, Unit 1 (Optional), CLIN 0009
1.4.10 Manufacture and Delivery of New Gearbox, Unit 1 (Optional), CLIN 0010
1.4.11 Installation of New Gearbox, Unit 1 (Optional), CLIN 0011
1.4.12 Testing and Commissioning, Unit 1 (Optional), CLIN 0012
1.4.13 Mobilization and Demobilization, Unit 3 (Optional), CLIN 0013
1.4.14 Propeller Rehabilitation, Unit 3(Optional), CLIN 0014
1.4.15 Pump Shaft, Upper and Lower Bearing parts Install and Rehabilitation, Unit 3 (Optional), CLIN 0015
1.4.16 Manufacture and Delivery of New Gearbox, Unit 3 (Optional), CLIN 0016
1.4.17 Installation of New Gearbox, Unit 3 (Optional), CLIN 0017
1.4.18 Testing and Commissioning, Unit 3 (Optional), CLIN 0018

PART 2 PRODUCTS

PART 3 EXECUTION

-- End of Section Table of Contents --

SECTION 01 22 00.00 25

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 GENERAL INFORMATION

In each instance, the Contract price for an item will constitute full compensation as herein specified, as shown, or as otherwise approved. The Contract price and payment will also constitute full compensation for all work incidental to completion of the item, unless such work is otherwise specifically mentioned for separate payment under another line item. In the event any work is required by the specifications Sections or by the Drawings and not specifically mentioned in the Paragraphs MEASUREMENT AND PAYMENT, separate or direct payment will not be made and all costs thereof are incidental to the work and included in the Contract prices and payments for all Contract Line Item Numbers (CLIN) listed in the price schedule. Payment for work activities involving lead based paint will be incidental to the related CLIN.

1.2 UNIT PRICE PAYMENT ITEMS

Payment items for the work of this Contract on which the Contract unit price payments will be made are listed in Section 00 10 00, PRICE SCHEDULE, and described below. The unit price and payment made for each item listed will constitute full compensation for furnishing all plant, labor, materials, and equipment; performing all associated Contractor quality control, environmental protection, commissioning, preparation of working as-built drawing redlines, O&M manuals, tests and reports, meeting safety requirements; and for performing all work required for each of the unit price items.

1.3 JOB PAYMENT ITEMS

Payment items for the work of this Contract for which Contract job payments will be made are listed in Section 00 10 00, PRICE SCHEDULE, and described below. All costs for items of work, which are not specifically mentioned to be included in a particular job item, must be included in the listed job item most closely associated with the work involved. The job price and payment made for each item listed will constitute full compensation for furnishing all plant, labor, materials, and equipment; performing all associated Contractor quality control, environmental protection, commissioning, preparation of working as-built drawing redlines, O&M manuals, tests and reports, meeting safety requirements; and for performing all work required for which separate payment is not otherwise provided. Provide a schedule of values for job items prior to the first pay request. Update with each subsequent payment request.

MANDATORY ITEMS

1.4 MEASUREMENT AND PAYMENT

1.4.1 Mobilization and Demobilization (Unit 2), CLIN 0001

a. Measurement: Measurement will be made as a job for mobilizing and

demobilizing all plant, equipment, fuel, supplies, materials, and personnel to and from the job site. This Contract Line Item Number (CLIN) applies to the Prime Contractor and all subcontractor mobilization and demobilization.

b. Payment: Payment will be made at the Contract amount under CLIN 0001 as stated in FAR 252.236-7004, PAYMENT FOR MOBILIZATION AND DEMOBILIZATION (Dec 1991). Submit a schedule of mobilization and demobilization costs prior to submitting the first request for payment.

1.4.2 Propeller Rehabilitation (Unit 2), CLIN 0002

a. Measurement: Measurement will be made as a job for all costs associated with fabrication for the rehabilitation of the propeller.

b. Payment: Payment will be made at the Contract amount under CLIN 0002.

1.4.3 Pump Shaft, Upper and Lower Bearing parts Install and Rehabilitation (Unit 2), CLIN 0003

a. Measurement: Measurement will be made as a job for providing all labor, equipment, materials, parts, and incidentals for the Pump Shaft, Upper and Lower Bearing parts Install and Rehabilitation.

b. Payment: Payment will be made at the Contract amount under CLIN 0003

1.4.4 Manufacture and Delivery of New Gearbox (Unit 2), CLIN 0004

a. Measurement: Measurement will be made as a job for providing all labor, equipment, materials, parts, and incidentals for the manufacture and delivery of the new gearbox.

b. Payment: Payment will be made at the Contract amount under CLIN 0004.

1.4.5 Installation of New Gearbox (Unit 2), CLIN 0005

a. Measurement: Measurement will be made as a job for providing all labor, equipment, materials, parts, and incidentals for the installation of the new gearbox.

b. Payment: Payment will be made at the Contract amount under CLIN 0005.

1.4.6 Testing and Commissioning (Unit 2), CLIN 0006

a. Measurement: Measurement will be made as a job for providing all labor, equipment, materials, parts, and incidentals for the testing and commissioning of Unit 2.

b. Payment: Payment will be made at the Contract amount under CLIN 0006.

OPTIONAL ITEMS

1.4.7 Mobilization and Demobilization, Unit 1 (Optional), CLIN 0007

a. Measurement: Measurement will be made as a job for mobilizing and demobilizing all plant, equipment, fuel, supplies, materials, and personnel to and from the job site. This Contract Line Item Number (CLIN) applies to the Prime Contractor and all subcontractor mobilization and demobilization.

b. Payment: Payment will be made at the Contract amount under CLIN 0007 as stated in FAR 252.236-7004, PAYMENT FOR MOBILIZATION AND DEMOBILIZATION (Dec 1991). Submit a schedule of mobilization and demobilization costs prior to submitting the first request for payment.

1.4.8 Propeller Rehabilitation, Unit 1(Optional), CLIN 0008

a. Measurement: Measurement will be made as a job for all costs associated with fabrication and installation of the pump shaft, propeller, upper and lower bearings.

b. Payment: Payment will be made at the Contract amount under CLIN 0008.

1.4.9 Pump Shaft, Upper and Lower Bearing parts Install and Rehabilitation, Unit 1 (Optional), CLIN 0009

a. Measurement: Measurement will be made as a job for providing all labor, equipment, materials, parts, and incidentals for the Pump Shaft, Upper and Lower Bearing parts Install and Rehabilitation on Unit 1.

b. Payment: Payment will be made at the Contract amount under CLIN 0009

1.4.10 Manufacture and Delivery of New Gearbox, Unit 1 (Optional), CLIN 0010

a. Measurement: Measurement will be made as a job for providing all labor, equipment, materials, parts, and incidentals for the manufacture and delivery of the new gearbox for Unit 1.

b. Payment: Payment will be made at the Contract amount under CLIN 0010.

1.4.11 Installation of New Gearbox, Unit 1 (Optional), CLIN 0011

a. Measurement: Measurement will be made as a job for providing all labor, equipment, materials, parts, and incidentals for the installation of the new gearbox for Unit 1.

b. Payment: Payment will be made at the Contract amount under CLIN 0011.

1.4.12 Testing and Commissioning, Unit 1 (Optional), CLIN 0012

a. Measurement: Measurement will be made as a job for providing all labor, equipment, materials, parts, and incidentals for the testing and commissioning of Unit 1.

b. Payment: Payment will be made at the Contract amount under CLIN

0012.

1.4.13 Mobilization and Demobilization, Unit 3 (Optional), CLIN 0013

a. Measurement: Measurement will be made as a job for mobilizing and demobilizing all plant, equipment, fuel, supplies, materials, and personnel to and from the job site. This Contract Line Item Number (CLIN) applies to the Prime Contractor and all subcontractor mobilization and demobilization.

b. Payment: Payment will be made at the Contract amount under CLIN 0013 as stated in FAR 252.236-7004, PAYMENT FOR MOBILIZATION AND DEMOBILIZATION (Dec 1991). Submit a schedule of mobilization and demobilization costs prior to submitting the first request for payment.

1.4.14 Propeller Rehabilitation, Unit 3(Optional), CLIN 0014

a. Measurement: Measurement will be made as a job for all costs associated with fabrication and installation of the pump shaft, propeller, upper and lower bearings.

b. Payment: Payment will be made at the Contract amount under CLIN 0014.

1.4.15 Pump Shaft, Upper and Lower Bearing parts Install and Rehabilitation, Unit 3 (Optional), CLIN 0015

a. Measurement: Measurement will be made as a job for providing all labor, equipment, materials, parts, and incidentals for the Pump Shaft, Upper and Lower Bearing parts Install and Rehabilitation on Unit 1.

b. Payment: Payment will be made at the Contract amount under CLIN 0015

1.4.16 Manufacture and Delivery of New Gearbox, Unit 3 (Optional), CLIN 0016

a. Measurement: Measurement will be made as a job for providing all labor, equipment, materials, parts, and incidentals for the manufacture and delivery of the new gearbox for Unit 1.

b. Payment: Payment will be made at the Contract amount under CLIN 0016.

1.4.17 Installation of New Gearbox, Unit 3 (Optional), CLIN 0017

a. Measurement: Measurement will be made as a job for providing all labor, equipment, materials, parts, and incidentals for the installation of the new gearbox for Unit 1.

b. Payment: Payment will be made at the Contract amount under CLIN 0017.

1.4.18 Testing and Commissioning, Unit 3 (Optional), CLIN 0018

a. Measurement: Measurement will be made as a job for providing all labor, equipment, materials, parts, and incidentals for the testing and commissioning of Unit 1.

b. Payment: Payment will be made at the Contract amount under CLIN 0018.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 32 01.00 25

PROJECT SCHEDULE

PART 1 GENERAL

1.1 REFERENCES
1.2 SUBMITTALS
1.3 QUALITY CONTROL
1.4 GENERAL REQUIREMENTS
1.5 BASIS FOR PAYMENT AND COST LOADING
1.6 SOFTWARE REQUIREMENTS
1.6.1 Critical Path Method
1.6.2 Milestones
1.6.3 Level of Detail Required
1.6.3.1 Activity Durations
1.6.3.2 Procurement Activities
1.6.3.3 Critical Activities
1.6.3.4 Government Activities
1.6.3.5 Responsibility
1.6.3.6 Work Areas
1.6.3.7 Contract Line Item Number (CLIN)
1.6.3.8 Phase of Work
1.6.3.9 Category of Work
1.6.3.10 Definable Features of Work
1.6.3.11 Modification or Claim Number
1.6.4 Scheduled Project Completion and Activity Calendars
1.6.4.1 Project Start Date
1.6.4.2 Constraint of Last Activity
1.6.4.3 Early Project Completion
1.6.5 Interim Completion Dates
1.6.5.1 Start Phase
1.6.5.2 End Phase
1.6.5.3 Phase "X" Hammock
1.6.6 Default Progress Data Disallowed
1.6.7 Out-of-Sequence Progress
1.6.8 Negative Lags and Start to Finish Relationships
1.6.9 Calculation Mode
1.7 SUBMISSIONS
1.7.1 Preliminary Schedule
1.7.2 Initial Schedule
1.7.3 Standard Activity Coding Dictionary
1.8 SUBMISSION REQUIREMENTS
1.8.1 Data Submission
1.8.2 Narrative Report
1.8.3 Approved Changes Verification
1.8.4 Schedule Reports
1.8.4.1 Activity Report
1.8.4.2 Logic Report
1.8.4.3 Total Float Report

1.8.4.4 Earnings Report by CLIN
1.8.5 Gantt Chart
1.8.5.1 Continuous Flow
1.8.5.2 Project Milestone Dates
1.8.5.3 Critical Path
1.8.5.4 Banding
1.8.5.5 S-Curves
1.9 PERIODIC PROGRESS MEETINGS
1.9.1 Update Submission Following Progress Meeting
1.9.2 Status of Activities
1.9.2.1 Start and Finish Dates
1.9.2.2 Remaining Duration
1.9.2.3 Cost Completion
1.9.2.4 Percent Complete
1.9.2.5 Logic Changes
1.9.2.6 Other Changes
1.10 REQUESTS FOR TIME EXTENSIONS
1.10.1 Justification of Delay
1.10.2 Extension Submission Requirements
1.10.3 Additional Submission Requirements
1.11 DIRECTED CHANGES
1.12 OWNERSHIP OF FLOAT
1.13 PAYMENT
1.14 TRANSFER OF SCHEDULE DATA INTO RMS CM

PART 2 PRODUCTS

PART 3 EXECUTION

-- End of Section Table of Contents --

SECTION 01 32 01.00 25

PROJECT SCHEDULE

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)

ER 1-1-11 (2017) Administration -- Project Schedules

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

Preliminary Schedule; G ECCC

Initial Schedule; G ECCC

Schedule Update

1.3 QUALITY CONTROL

Designate an authorized representative who must be responsible for the preparation of the schedule and all required updating (activity status) and preparation of reports. The authorized representative must be experienced in scheduling projects similar in nature and complexity to this project and must be experienced in the use of the scheduling software that meets the requirements of this specification.

1.4 GENERAL REQUIREMENTS

a. Prepare for approval a Project Schedule, as described herein, pursuant to FAR 52.236-15, SCHEDULES FOR CONSTRUCTION CONTRACTS. Show in the schedule the sequence in which the Contractor proposes to perform the work and dates on which the Contractor contemplates starting and completing all schedule activities. The scheduling of the entire project is required. Scheduling of construction are the responsibility of the Contractor. Contractor management personnel must actively participate in its development. Subcontractors and suppliers working on the project must also contribute in developing and maintaining an accurate Project Schedule. Coordinate with other Contractor's work at or near the site of the work under this Contract in accordance with FAR 52.236-8, OTHER CONTRACTS.

b. The approved Project Schedule must be used to measure the progress of the work, to aid in evaluating time extensions, and to provide the basis of all progress payments.

1.5 BASIS FOR PAYMENT AND COST LOADING

Use the schedule as the basis for determining Contract earnings during each update period and therefore the amount of each progress payment. Lack of an approved schedule update, or qualified scheduling personnel, will result in the inability of the Contracting Officer (CO) to evaluate Contractor's progress for the purposes of payment. Failure of the Contractor to provide all required information will result in the disapproval of the preliminary, initial, and subsequent schedule updates. In the event schedule revisions have been directed by the CO and those revisions have not been included in subsequent revisions or updates, the CO may hold retainage up to the maximum allowed by Contract, each payment period, until such revisions to the Project Schedule have been made. Activity cost loading must be reasonable, as determined by the CO. The aggregate value of all activities coded to a Contract Line Item Number (CLIN) must equal the value of the CLIN on the Schedule.

1.6 SOFTWARE REQUIREMENTS

The schedule must be compatible with either Primavera P6 Professional V22 or MS Project 2016 scheduling software. The schedule must be compatible with Primavera P6 Professional V22.

1.6.1 Critical Path Method

Use the Critical Path Method (CPM) of network calculation to generate the Project Schedule. Prepare the Project Schedule using the Precedence Diagram Method (PDM).

1.6.2 Milestones

Include milestone activities for each significant project event including but not limited to: Notice to Proceed (NTP), contractually required work windows, foundation/substructure construction complete, superstructure construction complete, permanent power complete, systems commissioning complete, construction complete, and Contract complete.

1.6.3 Level of Detail Required

Include an appropriate level of detail in the Project Schedule. Failure to develop or update the Project Schedule or provide data at the appropriate level of detail, as determined by the CO, will result in its disapproval. The CO will consider, but is not limited to, the following characteristics and requirements to determine the appropriate level of detail:

1.6.3.1 Activity Durations

Submissions must follow the direction of the CO regarding reasonable activity durations. Reasonable durations are those that allow the progress of activities to be accurately determined between payment periods. Procurement activities are defined herein. Less than two percent of all non-procurement activities must have Original Durations (OD) greater than 20 work days or 30 calendar days.

1.6.3.2 Procurement Activities

Include activities associated with the submittal, approval, procurement, fabrication and delivery of long lead materials, equipment, fabricated assemblies, and supplies. Long lead materials and equipment are those materials that have a procurement cycle of over 90 calendar days. A typical procurement sequence includes the string of activities: submit, approve, procure, fabricate, and deliver.

1.6.3.3 Critical Activities

The following must be included and properly scheduled:

a. Submission and approval of O&M manuals.

b. Submission and approval of Record (As-built) drawings.

c. Submission and approval of all required testing and commissioning (i.e. systems, fire protection, TAB, and HVAC).

d. Testing and commissioning (i.e. systems, fire protection, TAB, and HVAC).

e. Contractor's punch-out inspection.

f. Correction of punchlist from Contractor's punch-out inspection.

g. Government's pre-final inspection.

h. Correction of punch list from Government's pre-final inspection.

i. Final acceptance inspection.

1.6.3.4 Government Activities

Government and other agency activities that could impact progress must be shown. These activities include, but are not limited to: submittal reviews, approvals, environmental permit approvals, inspections, lockout/tagout procedures, utility tie-in, Government-Furnished Equipment (GFE), and NTP for phasing requirements.

1.6.3.5 Responsibility

Identify all activities in the Project Schedule by the party responsible to perform the work. Responsibility includes, but is not limited to: the subcontractor, the Prime Contractor, or Government agency performing a given task. The responsible party for each activity must be identified by the Responsibility Code. Activities must not have more than one Responsibility Code.

1.6.3.6 Work Areas

Identify all activities in the Project Schedule by the work area in which the activity occurs. Activities must not be allowed to cover more than one work area. Define work areas based on resource constraints or space constraints that would preclude a resource, such as a particular trade or craft work crew, from working in more than one work area at a time due to restraints on resources or space. The work area of each activity must be identified by the Work Area Code and activities must not have more than

one Work Area Code.

1.6.3.7 Contract Line Item Number (CLIN)

Code all activities to the CLIN on the Contract Line Item Schedule to which the activity belongs. CLIN Item code all activities, even when an activity is not cost loaded. An activity must not contain more than one CLIN Item Code.

1.6.3.8 Phase of Work

Identify all activities in the Project Schedule by the phase of work in which the activity occurs. Code construction phases proposed by the Contractor to allow filtering and organizing the schedule by construction packages. Activities must not contain work in more than one phase of work. Each activity must be identified with a single project phase and have only one Phase of Work code.

1.6.3.9 Category of Work

Assign a Category of Work Code to all Activities based upon the category of work to which the activity belongs. Category of work refers, but is not limited, to the procurement chain of activities including such items as construction submittals, approvals, procurement, fabrication, delivery, weather sensitive installation, non-weather sensitive installation, start-up, and testing. Assign a Category of Work Code to each activity. Each activity must have only one Category of Work Code.

1.6.3.10 Definable Features of Work

Assign a Definable Feature of Work Code to appropriate activities based on the definable feature of work to which the activity belongs. Definable Feature of Work is defined in Specification Section 01 45 00.00 25, QUALITY CONTROL. An activity must not have more than one Definable Feature of Work Code. Not all activities are required to be Definable Feature of Work Coded.

1.6.3.11 Modification or Claim Number

Assign an Activity code to any activity or sequence of activities added to the schedule as a result of a Contract Modification, when approved by the CO. Any activity that is added or changed by Contract modification or used to justify claimed time must be identified by a Mod or Claim Number that changed the activity. Activities must not belong to more than one modification or claim item. Approval to add these activities does not necessarily mean the Government accepts responsibility and, therefore, liability for such activities and any associated impacts to the schedule, but rather the Government recognizes such activities are appropriately added to the schedule for the purposes of maintaining a realistic and meaningful schedule. Such activities must not be Responsibility Coded to the Government unless approved. Existing activities must not normally be changed to reflect modifications.

1.6.4 Scheduled Project Completion and Activity Calendars

The schedule interval must extend from NTP date to the required final physical completion and Contract end dates. The Contract completion activity (End Project) must finish based on the required Contract duration in the accepted Contract proposal, as adjusted for any approved Contract

time extensions. The first scheduled work period must be the day after NTP is received by the Contractor. Schedule activities on a calendar to which the activity logically belongs. Activities may be assigned to a seven-day calendar when the Contract assigns calendar day durations for the activity such as a Government Acceptance activity. If the Contractor intends to perform physical work less than seven days per week, schedule the associated activities on a calendar with non-work periods identified including weekends and holidays. Assign the Category of Work Code - Weather Sensitive Installation to those activities that are weather sensitive. Original durations must account for anticipated normal adverse weather. The Government will interpret all work periods not identified as non-work periods on each calendar as meaning the Contractor intends to perform work during those periods.

1.6.4.1 Project Start Date

Start the schedule no earlier than the date on which the NTP was acknowledged. Include as the first activity in the Project Schedule an activity called "Start Project." The "Start Project" activity must have an early start "ES" constraint date, equal to the date that the NTP was acknowledged, and a zero-day duration.

1.6.4.2 Constraint of Last Activity

Completion of the last physical activity in the schedule must be constrained by final construction physical completion date. Submission and acceptance of the last transmittal in the schedule must be constrained by the Contract end date. Schedule calculations must result in a negative float when the calculated early finish date of the last activity is later than the Contract end date. Include as the last activity in the Project Schedule an activity called "End Project". The "End Project" activity must have a late finish "LF" constraint date equal to the Contract end date for the project, and a zero-day duration or by using the "project must finish by" date in the scheduling software. The schedule must have no constrained dates other than those specified in the Contract. There must only be two open ended activities: Start Project (or NTP) with no predecessor logic and End Project with no successor logic.

1.6.4.3 Early Project Completion

In the event the Project Schedule shows completion of the project prior to the final construction physical completion and/or Contract end date, identify those activities that it intends to accelerate and/or those activities that are scheduled in parallel to support the Contractor's "early" completion. Specifically address each of the activities noted in the narrative report at every Project Schedule update period to assist the CO in evaluating the Contractor's ability to actually complete prior to the Contract period. The last activity must have a late finish constraint equal to the Contract end date and the schedule must calculate positive float. The Government will not approve an early completion schedule with zero float on the longest path. The Government is under no obligation to accelerate activities for which it is responsible to support a proposed early Contract completion.

1.6.5 Interim Completion Dates

Contractually specified interim construction completion dates must be constrained to show negative float if the early finish date of the last activity in that phase falls after the interim construction completion

date.

1.6.5.1 Start Phase

Include as the first activity for a project phase an activity called "Start Phase X" where "X" refers to the phase of work. The "Start Phase X" activity must have an "ES" constraint date equal to the date on which the NTP was acknowledged, and a zero-day duration.

1.6.5.2 End Phase

Include as the last activity in a project phase an activity called "End Phase X" where "X" refers to the phase of work. The "End Phase X" activity must have an "LF" constraint date equal to the date on which the NTP was acknowledged, and a zero-day duration.

1.6.5.3 Phase "X" Hammock

Include a hammock type activity for each project phase called "Phase X" where "X" refers to the phase of work. The "Phase X" activity must be logically tied to the earliest and latest activities in the phase.

1.6.6 Default Progress Data Disallowed

Actual Start and Finish dates must not be automatically updated by default mechanisms that may be included in the scheduling software systems. Actual Start (AS) and Actual Finish (AF) dates assigned during the updating process must match those dates provided from Contractor Quality Control Reports. Failure of the Contractor to document the AS and AF dates on the Daily Quality Control Report for every in-progress or completed activity, and failure to ensure that the data contained on the Daily Quality Control reports is the sole basis for schedule updating must result in the disapproval of the Contractor's schedule and the inability of the CO to evaluate Contractor progress for payment purposes. Updating of the percent complete and the remaining duration of any activity must be independent functions. Program features which calculate one of these parameters from the other must be disabled.

1.6.7 Out-of-Sequence Progress

Activities that have progressed before all preceding logic has been satisfied (Out-of-Sequence Progress) will be allowed only on a case-by-case basis subject to approval by the CO. Propose logic corrections to eliminate all out of sequence progress or justify not changing the sequencing for approval prior to submitting an updated Project Schedule. Correct out of sequence progress that continues for more than two update cycles by logic revision, as approved by the CO.

1.6.8 Negative Lags and Start to Finish Relationships

Lag durations contained in the Project Schedule must not have a negative value. Do not use Start to Finish (SF) relationships.

1.6.9 Calculation Mode

Schedule calculations must retain the logic between predecessors and successors even when the successor activity starts and the predecessor activity has not finished. Software features that in effect sever the tie between predecessor and successor activities when the successor has

started and the predecessor logic is not satisfied ("progress override") will not be allowed.

1.7 SUBMISSIONS

Provide the submissions as described below. The data, reports, and network diagrams required for each submission must be in accordance with Paragraph entitled SUBMISSION REQUIREMENTS.

1.7.1 Preliminary Schedule

Submit the Preliminary Schedule, defining the Contractor's planned operations for the first 90 calendar days, for approval within 15 calendar days after the NTP is acknowledged. The approved preliminary schedule must be used for payment purposes not to exceed 90 calendar days after NTP. Completely cost load the Preliminary Schedule to balance the Contract award CLINs shown on the Price Schedule. Detail it for the first 90 calendar days after NTP. It may be summary in nature for the remaining performance period. It must be early start and late finish constrained and logically tied as previously specified. The Preliminary Schedule forms the basis for the Initial Schedule specified herein and must include all of the required submissions and approvals identified in the Contract (for example, Quality Control Plan, Safety Plan, and Environmental Protection Plan), other construction, and non-construction activities intended to occur within the first 90 calendar days after NTP.

1.7.2 Initial Schedule

a. Submit the Initial Schedule for approval within 30 calendar days after NTP. Provide a reasonable and realistic sequence of activities which represent all work through the entire Contract performance period. The Initial Schedule must be at a reasonable level of detail as determined by the CO.

b. Periodic Schedule Updates - Based on the result of progress meetings, specified in Paragraph entitled PERIODIC PROGRESS MEETINGS, submit periodic schedule updates. These submissions will enable the CO to assess Contractor's progress. If the Contractor fails or refuses to furnish the information and Project Schedule data, which in the judgment of the CO is necessary for verifying the Contractor's progress, the Contractor must be deemed not to have provided an estimate upon which progress payment may be made.

1.7.3 Standard Activity Coding Dictionary

Use the activity coding structure defined in the Standard Data Exchange Format (SDEF) in ER 1-1-11, Appendix A. This exact structure is mandatory, even if some fields are not used. A template SDEF compatible schedule backup file (sdef.prx) is available on the RMS website: http://rms.usace.army.mil/. The SDEF format is as follows:

SDEF Format			
Field	Activity Code	Length	Description
1	WRKP	3	Workers per Day

SDEF Format			
Field	Activity Code	Length	Description
2	RESP	4	Responsible Party (e.g. GC, subcontractor, USACE)
3	AREA	4	Area of Work
4	MODF	6	Modification or REA number
5	BIDI	6	Bid Item (CLIN)
6	PHAS	2	Phase of Work
7	CATW	1	Category of Work
8	FOW1	10	Feature of Work (used up to 10 characters in length)
9	FOW2	10	Feature of Work (used up to 20 characters in length)
10	FOW3	10	Feature of Work (used up to 30 characters in length)

1.8 SUBMISSION REQUIREMENTS

Submit the following items for the Preliminary Schedule, Initial Schedule, and every Periodic Schedule update throughout the life of the project:

1.8.1 Data Submission

Provide the Project Schedule via email or file transfer site as required by the COR. Name files indicating the type of schedule: (Preliminary, Initial,or Update), Contract number, and Data Date.

1.8.2 Narrative Report

Provide a Narrative Report with the preliminary, initial, and each update of the Project Schedule, as the basis of the Contractor's progress payment request. Include: a description of activities along the two most critical paths, a description of current and anticipated problem areas or delaying factors and their impact, and an explanation of corrective actions taken or required to be taken. The narrative report is expected to communicate to the Government the Contractor's thorough analysis of the schedule output and its plans to compensate for any problems, either current or potential, which are revealed through that analysis. Identify and explain why any activities that, based on their calculated late dates, should have either started or finished during the update period, but did not.

1.8.3 Approved Changes Verification

Include only those project schedule changes in the schedule submission that have been previously approved by the CO. Specifically reference, on an activity by activity basis, all changes made since the previous period and relate each change to documented, approved schedule changes.

1.8.4 Schedule Reports

The format for each activity for the schedule reports listed below must

contain: Activity Numbers, Activity Description, Original Duration, Remaining Duration, Early Start Date, Early Finish Date, Late Start Date, Late Finish Date, Total Float, Actual Start Date, Actual Finish Date, and Percent Complete. The following lists typical reports that will be requested, of which one or more may be requested for each schedule submission:

1.8.4.1 Activity Report

A list of all activities sorted according to activity number.

1.8.4.2 Logic Report

A list of detailed Preceding and Succeeding activities for every activity in ascending order by activity number.

1.8.4.3 Total Float Report

A list of all incomplete activities sorted in ascending order of total float. List activities which have the same amount of total float in ascending order of Early Start Dates. Do not show completed activities on this report.

1.8.4.4 Earnings Report by CLIN

A compilation of the Contractor's Total Earnings on the project from the NTP to the data date. This report must reflect the Earnings of specific activities based on the agreements made in the field and approved between the Contractor and CO at the most recent Monthly Progress Meeting. Provided that the Contractor has provided a complete schedule update, this report must serve as the basis of determining Contractor progress payments. Group activities by CLIN and sorted by activity numbers. This report must: sum all activities coded to a particular CLIN and provide a CLIN item percent earned value, and complete and sum all CLIN items to provide a total project percent complete. Printed report must contain, for each activity: the Activity Number, Activity Description, Original Budgeted Amount, Total Quantity, Quantity to Date, Percent Complete (based on cost), and Earnings to Date.

1.8.5 Gantt Chart

The gantt chart is required for the Preliminary, Initial, and Periodic Updates. Depict and display the order and interdependence of activities and the sequence in which the work is to be accomplished. The CO will use, but is not limited to, the following conditions to review compliance with this Paragraph:

1.8.5.1 Continuous Flow

Diagrams must show a continuous flow from left to right with no arrows from right to left. Show the activity number, description, duration, and estimated earned value on the diagram.

1.8.5.2 Project Milestone Dates

Show dates on the diagram for start of project, any Contract required interim completion dates, and final construction physical completion and Contract end dates.

1.8.5.3 Critical Path

Clearly show the two critical paths.

1.8.5.4 Banding

Organize activities as directed to assist in the understanding of the activity sequence. Typically, this flow will group activities by category of work, work area, and/or responsibility.

1.8.5.5 S-Curves

Show earnings curves for projected early and late earnings and earnings to date.

1.9 PERIODIC PROGRESS MEETINGS

Progress meetings to discuss payment must include a monthly onsite meeting or other regular intervals as determined by CO. During this meeting describe, on an activity by activity basis, all proposed revisions and adjustments to the Project Schedule required to reflect the current status of the project. The CO will approve activity progress, proposed revisions, and adjustments as appropriate. The Contractor's Project Manager and Authorized Scheduler must attend the meeting with the CO.

1.9.1 Update Submission Following Progress Meeting

If required by the CO, submit a schedule update, not later than four working days after the monthly progress meeting. Include a complete update of the Project Schedule containing all approved progress, revisions, and adjustments, based on the regular progress meeting, reflecting only those changes made during the previous update meeting.

1.9.2 Status of Activities

Update information, including Actual Start (AS) Dates, Actual Finish (AF) Dates, Remaining Durations (RD), and Percent Complete will be subject to the approval of the CO. As a minimum, address the following items on an activity by activity basis during each progress meeting:

1.9.2.1 Start and Finish Dates

Accurately show the status of the Actual Start (AS) and Actual Finish (AF) dates for each activity currently in-progress or completed since the last update. Only assign AS dates when actual progress occurs on an activity.

1.9.2.2 Remaining Duration

Update the estimated Remaining Duration for each activity in-progress. Base time-based progress calculations on Remaining Duration for each activity.

1.9.2.3 Cost Completion

Update the earnings for each activity started. Payment will be based on earnings for each in-progress or completed activity. Payment for individual activities will not be made for work that contains quality defects. A portion of the overall project amount may be retained based on delays of activities.

1.9.2.4 Percent Complete

Update the percent complete for each activity started based on the realistic assessment of earned value. Activities which are complete except for remaining minor punch list work and which do not restrain the initiation of successor activities may be declared 100 percent complete.

1.9.2.5 Logic Changes

Specifically identify and discuss all logic changes pertaining to NTP on change orders, change orders to be incorporated into the schedule, Contractor proposed changes in work sequence, corrections to schedule logic for out-of-sequence progress, lag durations, and other changes that have been made pursuant to Contract provisions. The Government will only approve logic revisions for the purpose of keeping the schedule valid in terms of its usefulness in calculating a realistic completion date, correcting erroneous logic ties, and accurately sequencing the work.

1.9.2.6 Other Changes

Other changes required due to delays in completion of any activity or group of activities include:

a. Delays beyond the Contractor's control, such as strikes and unusual weather.

b. Delays encountered due to submittals, Government Activities, deliveries, or work stoppages which make re-planning the work necessary.

c. Changes required to correct a schedule which does not represent the actual or planned prosecution and progress of the work.

1.10 REQUESTS FOR TIME EXTENSIONS

In the event the Contractor believes it is entitled to an extension of the Contract performance period, final construction physical completion date, Contract end date, or any interim milestone date, furnish the following for a determination by the CO: justification, Project Schedule data, and supporting evidence as the CO may deem necessary. Submission of proof of excusable delay, based on revised activity logic, duration, and costs (updated to the specific date that the delay occurred) is obligatory to any approvals by the Government. In response to each Request For Proposal issued by the Government, submit a schedule impact analysis demonstrating whether or not the change contemplated by the Government impacts the critical path.

1.10.1 Justification of Delay

The Project Schedule must clearly display that the Contractor has used, in full, all the float time available for the work involved with this request. The CO's determination as to the number of allowable days of Contract extension must be based upon the Project Schedule updates in effect for the time period in question, and other factual information. 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 a time extension to the performance period, final construction physical completion date, Contract end date, or any interim milestone date.

1.10.2 Extension Submission Requirements

a. Submit a justification for each request for a change in the final construction physical completion and Contract end dates of less than two weeks based upon the most recent schedule update at the time of the NTP or constructive direction issued for the change. Such a request must be in accordance with the requirements of other appropriate Contract Clauses and must include, as a minimum:

(1) A list of affected activities, with their associated Project Schedule activity number.

(2) A brief explanation of the causes of the change.

(3) An analysis of the overall impact of the changes proposed.

(4) A sub-network of the affected area.

b. Identify activities impacted by a unique activity code contained in the required data file.

1.10.3 Additional Submission Requirements

For any requested time extension of over two weeks, the CO may request an interim update with revised activities for a specific change request. Provide this within four days of the CO's request.

1.11 DIRECTED CHANGES

If the NTP is issued for changes prior to settlement of price and/or time, submit proposed schedule revisions within seven calendar days of the NTP being issued. The proposed revisions to the schedule will be approved by the Government prior to inclusion of those changes within the Project Schedule. If the Contractor fails to submit the proposed revisions, the CO may furnish the Contractor with suggested revisions to the Project Schedule. Include these revisions in the Project Schedule until revisions are submitted and final changes and impacts have been negotiated. If the Contractor has any objections to the revisions furnished by the CO, advise the CO within one week of receipt of the revisions. Regardless of the objections, continue to update the schedule with the CO's revisions until a mutual agreement in the revisions is reached. If the Contractor fails to submit alternative revisions within one week of receipt of the CO's proposed revisions, the Contractor will be deemed to have concurred with the CO's proposed revisions.

1.12 OWNERSHIP OF FLOAT

Float available in the schedule, at any time, must not be considered for the exclusive use of either the Government or the Contractor.

1.13 PAYMENT

Include an updated schedule with each progress payment request submitted. The updated schedule will be used as a basis to evaluate the Contractor's progress for purposes of payment. Lack of an updated schedule will result in an inability of the CO to perform a full evaluation of the Contractor's progress. Failure to provide all information, as specified, must result in the disapproval of the entire Project Schedule submission. The CO may

withhold payment until the Contractor's schedule has been approved by the Government. In the case where Project Schedule revisions have been directed by the CO and those revisions have not been included in the Project Schedule, the CO may hold retainage up to the maximum allowed by Contract, each payment period, until revisions to the Project Schedule have been made.

1.14 TRANSFER OF SCHEDULE DATA INTO RMS CM

Download and upload the schedule data into the Resident Management System Contractor MODE (RMS CM), Section 01 45 00.15 25 RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE (RMS CM), prior to databases being transferred to the Government and is considered to be additional supporting data in a form and detail required by the CO pursuant to FAR 52.232-5, PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS. The receipt of a proper payment request pursuant to FAR 52.232-27, PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS, is contingent upon the Government receiving both acceptable and approvable hard copies and electronic export from RMS CM of the application for progress payment.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 GENERAL INFORMATION
1.2 SUBMITTALS
1.3 DEFINITIONS
1.3.1 Submittal Descriptions (SD)
1.3.2 Approving Authority
1.3.3 Work
1.4 SUBMITTAL DESIGNATION
1.5 SUBMITTAL REGISTER
1.5.1 Maintain Submittal Register
1.5.2 Use of Submittal Register
1.5.3 Government Approved Submittals
1.5.3.1 Quantity of Submittals
1.5.3.2 Processing of "G" Submittals.
1.5.4 Information Only Submittals
1.5.4.1 General
1.5.4.2 Processing of Information Only Submittals
1.6 SUBMITTAL COORDINATION
1.6.1 Submittal Coordination Meeting
1.6.2 Submittal Register ENG Form 4288-R
1.6.3 Submittal Register Updates
1.7 SCHEDULING
1.8 TRANSMITTAL FORM (ENG FORM 4025-R)
1.9 CROSS-REFERENCE (ENG FORM 4288-R/ENG FORM 4025-R)
1.10 SUBMITTAL PROCEDURES
1.10.1 e-Submittals
1.10.2 Approval of Submittals by the Contractor
1.10.3 Drawings
1.10.3.1 Printed Material
1.11 SAMPLES REQUIRING LABORATORY ANALYSIS
1.12 SAMPLES REQUIRING VISUAL INSPECTION
1.13 PURCHASE ORDERS
1.14 CERTIFICATES OF COMPLIANCE
1.15 DISAPPROVED SUBMITTALS
1.16 APPROVED SUBMITTALS
1.17 APPROVED SAMPLES
1.18 CONTRACTOR'S FILES
1.19 PAYMENT
1.20 WITHHOLDING OF PAYMENT
1.21 CONTRACTOR APPROVAL STAMP

PART 2 PRODUCTS

PART 3 EXECUTION

-- End of Section Table of Contents --

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 GENERAL INFORMATION

a. Make submittals as required by the Specifications. The Contracting Officer (CO) may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective Sections.

b. Use the same units of weights and measures on all submittals as those used in the Contract Drawings.

c. Each submittal must be complete and in sufficient detail to allow ready determination of compliance with Contract requirements.

d. The Contractor's Quality Control (CQC) System Manager must check and approve all items prior to submittal and stamp, sign, and date indicating action taken. Proposed deviations from the Contract requirements must be clearly identified. Submittals must include 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.

e. Submittals requiring Government approval must be scheduled and approved prior to the acquisition of the material or equipment covered thereby.

f. 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.

g. Submittals requiring professional licensure, signature, and stamp must comply with all State professional licensing and registration requirements.

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Submit the following in accordance with this Section:

SD-01 Preconstruction Submittals

Submittal Register; G

SD-07 Certificates

Authorized Shop Drawing Approvers

1.3 DEFINITIONS

1.3.1 Submittal Descriptions (SD)

Submittal requirements are specified in the technical Sections and in the preliminary submittal register (ENG Form 4288-R, Attachment A1). Submittals are identified by Submittal Description (SD) numbers and titles as follows:

SD-01 Preconstruction Submittals

a. Submittals required prior to start of construction work. Includes, but not limited to: schedules, tabular list of data, or tabular list including location, features, or other pertinent information regarding products, materials, equipment, or components to be used in the work.

b. Certificates of insurance.

c. Surety bonds.

d. List of proposed subcontractors.

e. List of proposed products.

f. Construction Progress Schedule.

g. Submittal register.

h. Schedule of prices.

i. Health and safety plans.

j. Work plan.

k. Contractor Quality Control (CQC) plan.

l. Environmental protection plan.

SD-02 Shop Drawings

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

b. 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.

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

SD-03 Product Data

a. 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.

b. Warranty language when the Contract requires extended product warranties.

SD-04 Samples

a. 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.

b. 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.

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

SD-05 Design Data

a. Design calculations, mix designs, analyses, or other data pertaining to a part of work.

SD-06 Test Reports

a. 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 accordance with specified requirements. (Testing must have been within three years of date of Contract award for the project.)

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

c. Report which 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.

d. Investigation reports.

e. Daily logs and checklists.

f. Final acceptance test and operational test procedure.

g. Any reports required by the CO or designated representative to assure successful completion of tasks during the life of the Contract.

SD-07 Certificates

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

b. Document required of Contractor, or of a manufacturer, supplier, installer, or subcontractor through Contractor, the purpose of which is to further quality of orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel

qualifications.

c. Confined space entry permits.

d. Text of posted operating instructions.

SD-08 Manufacturer's Instructions

Preprinted material describing installation of a product, system, or material, including special notices and SDS concerning impedances, hazards, and safety precautions.

SD-09 Manufacturer's Field Reports

a. Documentation of the testing and verification actions taken by manufacturer's representative at the job site, in the vicinity of the job site, or on a sample taken from the job site, on a portion of the work, during or after installation, to confirm compliance with manufacturer's standards or instructions. The documentation must be signed by an authorized official of a testing laboratory or agency and must state the test results; and indicate whether the material, product, or system has passed or failed the test.

b. Factory test reports.

SD-10 Operation and Maintenance Data

a. Data that is furnished by the manufacturer, or the system provider, to the equipment operating and maintenance personnel, including manufacturer's help and product line documentation necessary to maintain and install equipment. This data is needed by operating and maintenance personnel for the safe and efficient operation, maintenance, and repair of the item.

b. This Data is intended to be incorporated in an operations and maintenance manual or control system.

SD-11 Closeout Submittals

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

b. Special requirements necessary to properly close out a construction Contract. For example, Record Drawings and as-built drawings.

1.3.2 Approving Authority

Office or designated person authorized to approve submittal.

1.3.3 Work

As used in this Section, on- and off-site construction required by Contract documents, including labor necessary to produce submittals (except those SD-01 Pre-Construction Submittals noted above) construction, materials, products, equipment, and systems incorporated or to be incorporated in such construction.

1.4 SUBMITTAL DESIGNATION

Submittals are classified as follows:

a. Government Approved (G). Government approval is required for critical materials, deviations, an "or equal" decision, equipment whose compatibility with the entire system must be checked, and other items as designated by the CO.Within the terms of FAR 52.236-21, SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, they are considered to be "shop drawings".

b. Information Only. Submittals not requiring Government approval will be for information only. Within the terms of the FAR 52.236-21, SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, these submittals are not considered to be "shop drawings".

1.5 SUBMITTAL REGISTER

1.5.1 Maintain Submittal Register

a. Prepare and maintain Submittal Register, ENG Form 4288-R, see Section 01 45 00.15 25, RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE (RMS CM), as the work progresses. Do not change data which is output in columns (c), (d), (e), and (f) as delivered by Government; retain data which is output in columns (a), (g), (h), and (i) as approved. This list may not be all inclusive and additional submittals may be required. Do not preassign transmittal numbers when preparing the submittal register. The preliminary and then the approved submittal register will become the scheduling documents and will be updated monthly and used to control submittals throughout the life of the Contract.

b. The Government will provide the preliminary 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 No. and type, e.g. SD-02 Shop Drawings) required in each Specification Section.

    Column (e): Lists one principal paragraph in 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 project requirements.

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

1.5.2 Use of Submittal Register

Submit submittal register with project schedule and QC plan. Verify that all submittals required for work are listed and add missing submittals. Coordinate, update, and complete the fields on the submitted register in RMS CM with the project schedule and QC plan.

1.5.3 Government Approved Submittals

1.5.3.1 Quantity of Submittals

SD-01, SD-02, SD-03, and SD-05 through SD-11 submittals: Upload submittals with corresponding ENG 4025-R transmittal forms as outlined in Paragraph entitled E-SUBMITTALS. SD-04 submittals: Submit two samples of "G" submittals with two corresponding ENG 4025-R transmittal forms, unless otherwise specified. Upon completion of review, "G" submittal copies will be marked with an action code, dated, electronically signed, and electronically returned to the Contractor as specified below:

1.5.3.2 Processing of "G" Submittals.

a. Submittals will be reviewed and processed as follows:

(1) Approved as Submitted (Action Code "A"): Submittals which can be approved without correction will be stamped "Approved" and returned electronically to the Contractor.

(2) Approved, Except as Noted on Drawings (Action Code "B"): Submittals which have only minor discrepancies will be annotated in red to indicate necessary corrections. Marked material will be stamped "Approved Except as Noted" and returned electronically to the Contractor for correction.

(3) Approved, Except as Noted on Drawings, Resubmission Required (Action Code "C"): Submittals which are incomplete or require more than minor corrections will be annotated in red to indicate necessary corrections. Marked material will be stamped "Approved Except as Noted - Resubmission Required" and returned electronically to the Contractor for correction. Resubmittal of only those items needing correction required.

(4) Will be Returned by Separate Correspondence (Action Code "D"): Submittals will be addressed by Serial Letter and the Contractor must respond according to instructions in the letter.

(5) Disapproved (Action Code "E"): Submittals which are fundamentally in error, cover wrong equipment or construction, or require extensive corrections, will be returned to the Contractor stamped "Disapproved." Submittal will be returned electronically to the Contractor and an explanation will be furnished on the submitted material or on ENG Form 4025-R indicating reason for disapproval. Complete resubmittal required.

(6) Receipt Acknowledged (Action Code "F"): Submittals stamped "Receipt Acknowledged" are complete and returned electronically to the Contractor.

(7) Other (Specify) (Action Code "G"): Submittals requiring other specific action will be stamped "Other (Specify)" and returned with a description in the Remarks section. Submittal will be returned electronically to the Contractor. Resubmittal of only those items needing correction required.

(8) Receipt Acknowledged, Does Not Comply (Action Code "X"): Submittals which have been received but do not comply with Contract requirements. Submittal will be returned electronically

to the Contractor stamped "Receipt Acknowledged, Does Not Comply" and an explanation will be furnished. Corrective action and resubmittal required.

b. Resubmittal will not be required for approved submittals unless subsequent changes are made by Contractor or by Contract modification. For submittals required to be resubmitted, make corrections required, note any changes by dating the revisions to correspond with the change request date, and promptly resubmit the corrected material. Resubmittals must be associated with the "parent" by use of sequential numbers (for example, resubmittal of transmittal 8 will be 8.1, 8.2, etc). Government costs incurred after the first resubmittal may be charged to the Contractor.

1.5.4 Information Only Submittals

1.5.4.1 General

Upload submittal with corresponding ENG 4025 forms as outlined in Paragraph entitled E-SUBMITTALS. Normally information only submittals will not be returned. Government approval is not required on information only submittals. These submittals will be used for information purposes. 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 CO 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.

1.5.4.2 Processing of Information Only Submittals

Submit information only submittals electronically prior to delivery of the material or equipment to the job site. ENG Form 4025-R must be marked with the words "Contractor approved - information copy only" in the REMARKS block of the form. Submittals will be monitored and spot checks made. When such checks indicate noncompliance, the Contractor will be notified by the same method used for Government Approval submittals. Resubmittal of nonconforming information only submittals must be reclassified Government Approval ("G") and re-submitted electronically for approval.

1.6 SUBMITTAL COORDINATION

1.6.1 Submittal Coordination Meeting

Meet with the CO, after the preconstruction conference and before any submittals are sent to the CO, to further develop the preliminary submittal register (ENG Form 4288-R). During the meeting identify and group all required items into the categories as shown in Paragraph entitled SUBMITTAL DESIGNATION.

1.6.2 Submittal Register ENG Form 4288-R

Coordinate the submittal register with the progress schedule and submit within 60 days of Notice to Proceed. In preparing the final document, allow a minimum of 30 days for review and approval, and possible

resubmittal of each item on the register.

1.6.3 Submittal Register Updates

The CQC System Manager must review the listing at least every 30 days and take appropriate action to maintain an effective system. Submit copies of updated or corrected listings to the CO at least every 30 days in the quantity specified.

1.7 SCHEDULING

Schedule and submit concurrently submittals covering component items forming a system or items that are interrelated. Adequate time (a minimum of 30 calendar days) must be allowed and shown on the register for Government review and approval. 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. Allow for potential resubmittal of requirements.

b. Submittals called for by the Contract documents must be listed on the register. Approval by the CO does not relieve the Contractor of supplying submittals required by the Contract documents but which have been omitted from the register.

c. Re-submit register and annotate monthly with actual submission and approval dates. When all items on the register have been fully approved, no further re-submittal is required.

d. Carefully control procurement operations to ensure that each individual submittal is made on or before the Contractor scheduled submittal date shown on the approved "Submittal Register".

1.8 TRANSMITTAL FORM (ENG FORM 4025-R)

Use the sample transmittal form ENG Form 4025-R for submitting both Government Approval and Information Only submittals in accordance with the instructions on the reverse side of the form. These forms are included in the RMS CM software that the Contractor is required to use for this Contract, per Section 01 45 00.15 25, RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE (RMS CM). Fill forms in completely prior to submittal. Exercise special care to ensure proper listing of the specification paragraph number(s) and Contract Drawing sheet number(s) pertinent to the data submitted for each item. List each submittal item separately on the form, naming subcontractor, supplier, or manufacturer; applicable specification paragraph number(s); drawing/sheet number; pay item number; and any other information needed to identify the item, define its use, and locate it in the work. One or more ENG 4025-R forms may be used per Specification Section, however, DO NOT include more than one Specification Section per transmittal.

1.9 CROSS-REFERENCE (ENG FORM 4288-R/ENG FORM 4025-R)

To provide a cross-reference between the approved submittal register and transmittal forms, the Contractor must record the "transmittal numbers" assigned when submitting items in column "Transmittal No." of the ENG Form 4288-R. The numbers in column "Transmittal No." of the submittal register

must correspond to the column "Item No." on ENG Form 4025-R.

1.10 SUBMITTAL PROCEDURES

Upload submittals in accordance with subparagraphs entitled Government Approved Submittals and Information Only Submittals, unless indicated otherwise in the technical specifications. Submit a complete collated "reviewers copy" with one ENG 4025-R form and attachments (not originals). Submit hard copy and electronic copies of Record (as-built) Drawings and O&M Manuals in accordance with the applicable Specification Sections.

1.10.1 e-Submittals

The intent of electronic submittals is to expedite the construction process by reducing paperwork, improving information flow, and decreasing turnaround time. Transmit all submittals, including either an electronically signed or signed scanned copy of form ENG 4025, to the Government electronic (PDF) format via email or other secure internet accessible service such as ShareFile, ProCore, Submittal Exchange, or a FTP site that utilize 256-bit SSL encryption and hosted as SAS70 Type II compliant data centers. Submittals must be entered and tracked using RMS CM (see Section 01 45 00.15 25, RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE (RMS CM). At completion of Contract closeout, provide a minimum of two archival files that include all documents and tracking logs. Color samples, color charts, or physical material samples shall not be transmitted electronically. E-Submittals will not relieve the Contractor from following all applicable requirements within this and other Specifications Sections and Contract Clauses.

1.10.2 Approval of Submittals by the Contractor

a. Submit names and titles of Contractor Authorized Shop Drawing Approvers to the CO with the ENG Form 4288-R. Supplier or subcontractors certifications are not acceptable as meeting this requirement.

b. Before submittal to the CO, the Contractor's Authorized Shop Drawing Approvers must review and correct shop drawings prepared by subcontractors, suppliers, and itself, for completeness and compliance with Drawings and Specifications. Do not use red markings for correcting material to be submitted. Red markings are reserved for CO's use.

c. Submittals for Government Approval must first be Contractor-approved and stamped, see Paragraph entitled CONTRACTOR APPROVAL STAMP.

d. Submittals not conforming to the requirements of this Section will be returned to the Contractor for correction and resubmittal.

1.10.3 Drawings

Each drawing must be not larger than D size (22 inches high by 34 inches wide), include a title block in lower right hand corner, and a 3- by 4-inch clear area adjacent. The title block must contain vendor's name, Contract number, description of item(s), Contract line item number, and a revision block. Separate drawings are required for each Contract line item. Where drawings are submitted for assemblies of more than one piece of equipment or systems, of components dependent on each other for compatible characteristics, complete information must be submitted on all

such related components at the same time. The information must be complete and the sequence of drawing submittal must be such that all information is available for reviewing each drawing. Drawings for all items and equipment, of special manufacture or fabrication, must consist of complete assembly and detail drawings. All revisions after initial submittal must be shown by number, date, and subject in revision block. Any drawing submitted, that is not of satisfactory quality, will be returned and must be corrected and re-submitted.

1.10.3.1 Printed Material

All requirements for shop drawings apply to catalog cuts, illustrations, printed specifications, or other data submitted, except the 3- by 4-inch clear area adjacent to the title block is not mandatory. Mark out inapplicable portions of the documents. Applicable items such as model numbers, sizes, and accessories must be indicated by arrow or highlighted.

1.11 SAMPLES REQUIRING LABORATORY ANALYSIS

See Section 01 45 00.00 25, QUALITY CONTROL, for procedures and address for samples requiring Government testing.

1.12 SAMPLES REQUIRING VISUAL INSPECTION

Coordinate samples requiring only physical inspection for appearance and suitability with the on-site Government Quality Assurance Representative (GQAR).

1.13 PURCHASE ORDERS

a. Each purchase order issued by the Contractor for materials and equipment to be incorporated into the work must:

   (1) Clearly identify the applicable Contract number

   (2) Carry an identifying number

   (3) Be in sufficient detail to identify the material being purchased

   (4) Indicate a definite delivery date.

b. Furnish copies of purchase orders to the CO when the Contractor requests assistance for expediting deliveries of equipment or materials, or when requested by the CO for the purpose of quality assurance review.

1.14 CERTIFICATES OF COMPLIANCE

Submit an electronic copy of certificates required for demonstrating proof of compliance of materials with specification requirements. Each certificate must be signed by an official authorized to certify on behalf of the manufacturing company, contain the name and address of the Contractor, the project name and location, and the quantity and date or dates of shipment or delivery to which the certificates apply. Copies of laboratory test reports submitted with certificates must contain the name and address of the testing laboratory and the date or dates of the tests to which the report applies. Certification shall not be construed as relieving the Contractor from furnishing satisfactory material if, after tests are performed on selected samples, the material is found not to meet

the specific requirements.

1.15 DISAPPROVED SUBMITTALS

a. Make all corrections required by the CO and promptly furnish a corrected submittal in the form specified for the initial submittal. If the Contractor considers any correction or notation on the returned submittals to constitute a change to the Contract drawings or Specifications; notice as required under Contract Clause 52.243-4, CHANGES, is to be given to the CO. The Contractor must be responsible for the dimensions and design of connection details and construction of work. Failure to point out deviations may result in the Government requiring rejection and removal of such work at the Contractor's expense.

b. If changes are necessary to submittals, make such revisions and re-submit the submittals 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

a. The CO's approval or acceptance of submittals shall not be construed as a complete check, and indicates only that the general method of construction, materials, detailing, and other information are satisfactory.

b. Approval or acceptance will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor under the Contractor Quality Control (CQC) requirements of this Contract must be responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work.

c. After submittals have been approved by the CO, 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

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

b. If requested, approved and/or disapproved samples, including those which may be damaged in testing, will be returned at the expense of the Contractor upon completion of the Contract.

c. 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 of that material. Government reserves the right to disapprove any material or equipment which previously has proved unsatisfactory in service.

d. Samples of various materials or equipment delivered on the site or in place may be taken by the CO for testing. Samples failing to meet

Contract requirements will automatically void previous approvals. Contractor must replace such materials or equipment to meet Contract requirements.

e. Approval of the Contractor's samples by the CO does not relieve the Contractor of his/her responsibilities under the Contract.

1.18 CONTRACTOR'S FILES

Maintain "Approved as Accepted" and "Approved, Except as Noted on Drawings" (Action Codes "A" and "B") shop drawing files in fabrication shops and at field sites for Government use.

1.19 PAYMENT

Separate payment will not be made for submittals, and all costs associated therein must be included in the applicable unit prices or job prices contained in the Price Schedule. Payment will not be made for any material or equipment which does not comply with Contract requirements.

1.20 WITHHOLDING OF PAYMENT

Payment for materials incorporated in the work will not be made if required approvals have not been obtained. No payment will be made for any materials incorporated into the work for Information Only submittals found to contain errors.

1.21 CONTRACTOR APPROVAL STAMP

Stamps used by the Contractor on the submittal data to certify that the submittal meets Contract requirements must be similar to the following:

CONTRACTOR
(Firm Name)
_____ Approved
_____ Approved with corrections as noted on submittal data and/or attached sheets(s).
SIGNATURE: _____
TITLE: _____
DATE: _____

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 35 26.00 25

GOVERNMENTAL SAFETY REQUIREMENTS

PART 1 GENERAL

1.1 REFERENCES
1.2 SUBMITTALS
1.3 DEFINITIONS
1.3.1 High Visibility Mishap
1.3.2 Medical Treatment
1.3.3 Recordable Injuries or Illnesses
1.3.4 Government Property
1.4 REGULATORY REQUIREMENTS
1.5 DRUG AND ALCOHOL USE PREVENTION PROGRAM
1.6 SITE QUALIFICATIONS, DUTIES, AND MEETINGS
1.6.1 Personnel Qualifications
1.6.1.1 Site Safety and Health Officer (SSHO)
1.6.1.2 Alternate SSHO and Designated Representative (DR)
1.6.1.3 Crane Operators
1.6.2 Personnel Duties
1.6.2.1 Site Safety and Health Officer (SSHO)
1.6.3 Meetings
1.6.3.1 Preconstruction Conference
1.6.3.2 Safety Meetings
1.6.3.3 Work Phase Meetings
1.7 TRAINING
1.7.1 New Employee Indoctrination
1.7.2 Periodic Training
1.7.3 Training Plan
1.7.4 Hazardous Energy Control Plan and HEC Procedures Training Certification
1.7.5 Fall Protection Training Program
1.7.6 Arc Flash Hazard (AFH) Training Certificate
1.8 ACCIDENT PREVENTION PLAN (APP)
1.8.1 General Information
1.8.2 EM 385-1-1 Contents
1.9 ACTIVITY HAZARD ANALYSIS (AHA)
1.9.1 General
1.9.2 Periodic AHA Review and Updating
1.10 DISPLAY OF SAFETY INFORMATION
1.11 SITE SAFETY REFERENCE MATERIALS
1.12 EMERGENCY MEDICAL TREATMENT
1.13 PROJECT SAFE CLEARANCE PROCEDURE
1.13.1 General
1.13.2 Safe Clearance Procedure System
1.14 REPORTS
1.14.1 Accident Notification
1.14.2 Accident or Mishap Reports
1.14.3 Crane Testing Reports

1.14.4 Certificate of Compliance
1.15 HOT WORK
1.16 FACILITY OCCUPANCY CLOSURE
1.17 INCLEMENT WEATHER AND HEAT/COLD STRESS MANAGEMENT

PART 2 PRODUCTS

PART 3 EXECUTION

3.1 CONSTRUCTION AND OTHER WORK
3.1.1 General
3.1.2 Hazardous Material Exclusions
3.1.3 Unforeseen Hazardous Material
3.2 FALL HAZARD PROTECTION AND PREVENTION PROGRAM
3.2.1 General
3.2.2 Fall Protection Equipment and Systems
3.2.2.1 General
3.2.2.2 Personal Fall Arrest Equipment
3.2.3 Existing Anchorage
3.2.4 Horizontal Lifelines
3.2.5 Guardrails and Safety Nets
3.2.6 Rescue and Evacuation Procedures
3.2.7 Aerial Lift Equipment and Movable Work Platforms
3.2.8 Safety Monitoring System
3.2.9 Controlled Access Zones
3.3 SCAFFOLDING
3.4 EQUIPMENT
3.4.1 Load Handling Equipment (LHE)
3.4.2 Cranes, Hoists, and Rigging
3.5 EXCAVATIONS
3.5.1 Soil Classification
3.5.2 Utility Locations
3.5.3 Utility Location Verification
3.5.4 Utilities Within and Under Concrete, Bituminous Asphalt, and Other Impervious Surfaces
3.6 ELECTRICAL
3.6.1 Conduct of Electrical Work
3.6.2 Arc Flash Hazard (AFH) Program
3.7 WORK IN CONFINED SPACES
3.8 CRYSTALLINE SILICA
3.9 DUST CONTROL

-- End of Section Table of Contents --

SECTION 01 35 26.00 25

GOVERNMENTAL SAFETY REQUIREMENTS

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 SAFETY PROFESSIONALS (ASSP)

ANSI/ASSP A10.34	(2021) Protection of the Public on or Adjacent to Construction Sites
ANSI/ASSP Z490.1	(2016) Criteria for Accepted Practices in Safety, Health, and Environmental Training
ASSP A10.28	(2018) Safety Requirements for Work Platforms Suspended from Cranes or Derricks - American National Standard for Construction and Demolition Operations
ANSI/ASSP Z359.1	(2024) The Fall Protection Code

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME B30-PKG	Load Handling Equipment

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 10	(2022; ERTA 1 2021) Standard for Portable Fire Extinguishers
NFPA 241	(2022; ERTA 22-1) Standard for Safeguarding Construction, Alteration, and Demolition Operations
NFPA 51B	(2024) Standard for Fire Prevention During Welding, Cutting, and Other Hot Work
NFPA 70	(2023; ERTA 1 2024; TIA 24-1; TIA 25-2) National Electrical Code
NFPA 70E	(2024) Standard for Electrical Safety in the Workplace

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2024) Safety -- Safety and Occupational Health (SOH) Requirements
ER 385-1-100	(2014) Safety and Occupational Health: Arc Flash Hazard Program

ER 385-1-31	(2009) Safety and Occupational Health: The Control of Hazardous Energy

U.S. ARMY CORPS OF ENGINEERS - PORTLAND DISTRICT (NWP)

CENWP-OD-SAF-385-1	(2019) CENWP-OD Standing Safety Procedure 385-1, SAFETY, Portland District Supplement (Fixed Plant) to USACE, Hazardous Energy Control Program

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910	Occupational Safety and Health Standards
29 CFR 1910.146	Permit-required Confined Spaces
29 CFR 1910.94	Ventilation
29 CFR 1915	Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment
29 CFR 1926	Safety and Health Regulations for Construction
CPL 2.100	(1995) Application of the Permit-Required Confined Spaces (PRCS) Standards, 29 CFR 1910.146
CPL 02-00-147	The Control of Hazardous Energy - Enforcement Policy and Inspection Procedures

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Crane Operators; G

Training Plan; G

Hazardous Energy Control Plan and HEC Procedures Training Certification; G

Accident Prevention Plan (APP); G

Fall Prevention and Protection Plan; G

Fatigue Management Plan (FMP); G

Activity Hazard Analysis (AHA); G

Inclement Weather and Heat/Cold Stress Management Plans; G

Scaffolding; G

Arc Flash Hazard (AFH) Program; G

SD-06 Test Reports

Regulatory Citations, Violations, and Corrective Action

Drug and Alcohol Use Prevention Program

Accident or Mishap Reports

Crane Testing Reports

SD-07 Certificates

Arc Flash Hazard (AFH) Training Certificate

Confined Space Entry Permit

Hot Work Permit

Certificate of Compliance

1.3 DEFINITIONS

1.3.1 High Visibility Mishap

Any mishap which may generate publicity and/or high visibility. Report the following high visibility mishaps immediately:

a. Uncontrolled release of hazardous energy, including Arc Flash, Electrical, and other energy sources (such as pressurized gas, fluids, etc.)

b. Load Handling Equipment and Rigging

c. Fall-from-Height

d. Underwater diving

1.3.2 Medical Treatment

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 though provided by a physician or registered personnel.

1.3.3 Recordable Injuries or Illnesses

Any work-related injury or illness that results in:

a. Death, regardless of the time between the injury and death, or the length of the illness

b. Days away from work (any time lost after day of injury/illness onset)

c. Restricted work or transfer to another job

d. Medical treatment beyond first aid

e. Loss of consciousness

f. A significant injury or illness diagnosed by a physician or other licensed health care professional, even if it did not result in (a) through (e) above.

1.3.4 Government Property

Interpret "USACE" property and equipment specified in EM 385-1-1 as Government property and equipment.

1.4 REGULATORY REQUIREMENTS

a. In addition to the detailed requirements included in the provisions of this Contract, comply with the edition of EM 385-1-1 in effect on the date of the Solicitation for this Contract, and applicable Federal, State, and local laws, ordinances, criteria, rules and regulations. Submit regulatory citations, violations, and corrective action and 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 apply.

b. Contact the Contracting Officer (CO) immediately of any OSHA or other regulatory agency inspection or visit, and provide the CO with a copy of each citation, report, and Contractor response. Correct violations and citations promptly and provide written corrective action plan to the CO.

1.5 DRUG AND ALCOHOL USE PREVENTION PROGRAM

Conduct a proactive drug and alcohol use prevention program for all workers, Prime and subcontractor, on the site, to include administrative action for employees failing the program. Ensure that no employee uses illegal drugs, in accordance with Federal law, or consumes alcohol during work hours. Ensure no employees are under the influence of drugs or alcohol during work hours. Ensure all employees are fit for duty. During the Contract period, submit a copy of tests, including results of random testing, to the CO. Only submit numbers of individuals tested and results of tests, not personal data.

1.6 SITE QUALIFICATIONS, DUTIES, AND MEETINGS

1.6.1 Personnel Qualifications

1.6.1.1 Site Safety and Health Officer (SSHO)

a. Provide a Safety oversight team that includes a minimum of one Competent Person to function as the SSHO. The SSHO must meet the requirements of EM 385-1-1, Section 2-3.b, and ensure that the requirements of 29 CFR 1926 are met for the project. The 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's training, experience, and qualifications are as required by EM 385-1-1.

b. Provide a Competent Person for all of the hazards identified in the Contractor's Safety and Health Program in accordance with the accepted Accident Prevention Plan. The Competent Person 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) for acceptance by the CO in consultation with the Safety Office.

c. The SSHO must have no duties other than SSHO. The SSHO must meet the following requirements:

(1) A minimum of five years of continuous construction industry safety experience in supervising/managing general construction (managing safety programs or processes or conducting hazard analyses and developing controls) on similar projects.

(2) 30-hour OSHA Construction safety class or equivalent within the last four years.

(3) SSHOs must maintain competency through having taken eight hours of documented formal, on-line, or self-study safety and health related coursework every year.

(4) Competent Person training as needed.

1.6.1.2 Alternate SSHO and Designated Representative (DR)

a. The Alternate SSHO must meet the same requirements and assume the responsibilities of the project SSHO. Assistant SSHO's may be necessary during the main shift along with the lead SSHO, but are primarily intended to be on-site during the times that the lead SSHO is absent from the work site. The assistant SSHO may have other duties on the jobsite.

b. If the SSHO is off-site for a period longer than 24 hours, provide an alternate to fulfill the same roles and responsibilities as the primary SSHO.

c. 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: DRs are collateral duty safety personnel, with safety duties in addition to their full-time occupation.

d. If an activity, or task contains multiple sites and has been assessed and given an activity Risk Assessment Code (RAC) of low or medium, a DR must be appointed for each site where remote work locations are more than 45 minutes travel time from the SSHO's duty location.

(1) DRs must perform safety program tasks as designated by the SSHO and report safety findings to the SSHO.

(2) A DR may not be assigned to projects that have a RAC level of high or extremely high.

1.6.1.3 Crane Operators

Meet the crane operator's training and medical requirements in EM 385-1-1 Chapter 16; ASME B30-PKG; 29 CFR 1910; and 29 CFR 1926. Submit documentation for all crane operators including certification, qualifications, and designation in writing.

1.6.2 Personnel Duties

1.6.2.1 Site Safety and Health Officer (SSHO)

Superintendent, QC Manager, and SSHO are subject to dismissal if the above duties are not being effectively carried out. If the 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. 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 Daily Contractor Quality Control Report.

b. Conduct mishap investigations and complete required reports. Maintain the OSHA Form 300 and Daily Contractor Quality Control Report for Prime and subcontractors.

c. Maintain applicable safety reference material on the job site.

d. Attend the Preconstruction Conference, pre-work meetings including the Contractor Quality Control Preparatory Phase inspection meeting, Initial Phase inspection meetings, Follow-up Phase, additional Preparatory and Initial Phase meetings, and periodic in-progress meetings.

e. Implement and enforce accepted APPs and AHAs.

f. Maintain a safety and health deficiency tracking system that monitors outstanding deficiencies until resolution. Post a list of unresolved safety and health deficiencies on the Safety and Health Bulletin Board.

g. Ensure subcontractor compliance with safety and health requirements.

h. Maintain a list of hazardous chemicals on site and their safety data sheets (SDS).

1.6.3 Meetings

1.6.3.1 Preconstruction Conference

a. The purpose of the Preconstruction Conference is for the Contractor and the CO to become acquainted and explain the functions and operating procedures of their respective organizations.

b. Contractor representatives required to attend this Preconstruction Conference include anyone who has a responsibility or significant role in accident prevention on the project. This includes the project superintendent, SSHO, quality control supervisor, 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).

c. 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 CO as to which phases will require an analysis. In addition, establish a schedule for the preparation, submittal, review, and acceptance of AHAs to preclude project delays.

d. Deficiencies in the submitted APP will be brought to the attention of the Contractor at the Preconstruction Conference. Revise the plan to correct deficiencies and re-submit it for acceptance. Work will not begin until there is an accepted APP.

1.6.3.2 Safety Meetings

Conduct weekly safety meetings at the project site for all employees as required by EM 385-1-1. Inform and invite the CO to the meeting in advance. Attach minutes showing Contract title, signatures of attendees, and a list of topics discussed to the Daily Contractor Quality Control Report.

1.6.3.3 Work Phase Meetings

Discuss appropriate AHAs during Contractor's Quality Control (CQC) work phase meetings as required in Section 01 45 00.00 25 QUALITY CONTROL.

1.7 TRAINING

1.7.1 New Employee Indoctrination

Inform new employees (Prime and subcontractor) of specific site hazards before they begin work. Keep documentation of this orientation on file at the project site.

1.7.2 Periodic Training

Provide Safety and Health Training in accordance with EM 385-1-1 and the accepted APP. Ensure all required training has been accomplished for onsite employees.

1.7.3 Training Plan

Prior to beginning a new phase, provide training to all affected employees to include a review of the AHA to be implemented. Contractors can choose to utilize Job Hazard Analyses (JHA) in lieu of AHAs as long as the JHA meets the requirements of an AHA to include a Risk Assessment.

1.7.4 Hazardous Energy Control Plan and HEC Procedures Training Certification

a. Provide annual Hazardous Energy Control Plan and Procedure Affected Person (AP) training to all Contractor and subcontractor personnel working under, or in the vicinity of, clearances as defined in CENWP-OD-SAF-385-1 (Attachment A6).

b. All costs for this training must be considered incidental to the work, and therefore, no additional payment will be made. Cost for the training is approximately $55 per individual. Training is provided by Vivid Learning Systems and is available on line a thttps://hsi.com/partners/usace-training

c. Submit the training completion certification a minimum of seven days prior to the individuals arrival at site. Maintain training documentation on site, including the individual's name and date of training completion, in accordance with CENWP-OD-SAF-385-1.

1.7.5 Fall Protection Training Program

Institute a fall protection training program. As part of the Fall Hazard Protection and Prevention Program, provide training for each employee who might be exposed to fall hazards, see Paragraph FALL HAZARD PROTECTION AND PREVENTION PROGRAM. Provide training by a Competent Person for fall protection in accordance with EM 385-1-1. Document and retain training evaluations for fall protection and rescue for the current training program per ANSI/ASSP Z359.1.

1.7.6 Arc Flash Hazard (AFH) Training Certificate

All Contractor personnel working in or around equipment with a potential for an Arc Flash Hazard must have completed Arc Flash Hazard Training as defined in ER 385-1-100. Maintain training certification on site, including the individual's name and date of training, instructor's name, and outline of training content. Show certification of training annually for qualified individuals. Show certification for unqualified personnel within three years.

1.8 ACCIDENT PREVENTION PLAN (APP)

1.8.1 General Information

a. Use a Qualified Person to prepare the written site-specific APP. See EM 385-1-1 for definition of Qualified Person. Prepare the APP in accordance with the format and requirements of EM 385-1-1 and as supplemented herein. Cover all Paragraph and Subparagraph elements in EM 385-1-1, Section 2-7.b. Specific requirements for some of the APP elements are described below:

(1) The APP is job-specific and address any unusual or unique aspects of the project or activity for which it is written.

(2) Interface the Contractor's overall safety and health program with the APP. Include any portions of the Contractor's overall safety and health program referenced in the APP in the applicable APP element and made site-specific.

(3) The Government considers the Prime Contractor to be the "controlling authority" for all work site safety and health of the subcontractors.

(4) Inform 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.

(5) Sign the APP by the person and firm (senior person) preparing the APP, the Contractor, the on-site superintendent, and the designated SSHO.

b. Submit the APP to the CO 15 calendar days after Notice to Proceed for acceptance. Work cannot proceed without an accepted APP. The CO will review and comment on the Contractor's submitted APP and accept it when it meets the requirements of the Contract provisions.

c. Once accepted by the CO, the APP and appendices will be enforced as part of the Contract. Disregarding the provisions of this Contract or the accepted APP will be cause for stoppage of work, at the discretion of the CO, until the matter has been rectified.

d. Once work begins, changes to the accepted APP must be made with the knowledge and concurrence of the CO, project superintendent, SSHO, and quality control manager. 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 CO, both verbally and in writing, within 24 hours of discovery. In the interim take all necessary actions to restore and maintain safe working conditions in order to safeguard on-site personnel, visitors, the public (as defined by ANSI/ASSP A10.34), and the environment.

e. Maintained copies of the APP at the CO's office and at the work site. Continuously review and amend the APP, as necessary, throughout the life of the Contract. Incorporate unusual or high-hazard activities not identified in the original APP in the plan as they are discovered.

1.8.2 EM 385-1-1 Contents

In addition to the requirements above and those outlined in Section 2-7.b of EM 385-1-1, the following is required:

a. Names and qualifications (resumes including education, training, experience and certifications) of all 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 Qualified Persons. As a minimum, designate Competent Persons and submit qualifications 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; personal protective equipment and clothing to include selection, use and maintenance.

c. Confined Space Entry Plan. Develop a confined space entry plan in accordance with EM 385-1-1, applicable OSHA standards 29 CFR 1910, 29 CFR 1910.146, 29 CFR 1915, and 29 CFR 1926, and any other Federal, State, and local regulatory requirements identified in this Contract. Identify the Qualified Person's name and qualifications, training, and experience. Delineate the Qualified Person's authority to direct work

stoppage in the event of hazardous conditions. Include procedure for rescue by Contractor personnel and the coordination with emergency responders. (If there is no confined space work, include a statement that no confined space work exists and none will be created.)

d. Health Hazard Control Program. Designate a Competent and Qualified Person to establish and oversee a Health Hazard Control Program in accordance with EM 385-1-1. The program must ensure that employees, on-site Government representatives, and others, are not adversely exposed to chemical, physical, and biological agents and that necessary controls and protective actions are instituted to ensure health.

e. A Drug and Alcohol Use Prevention Program. Provide description of the on-site prevention program.

f. Training Records and Requirements. List of mandatory training and certifications which are applicable to this project (e.g. explosive actuated tools, confined space entry, fall protection, crane operation, hazardous energy control, vehicle operator, forklift operators, personal protective equipment, arc flash); list of requirements for periodic retraining/certification; outline requirements for supervisory and employee safety meetings.

g. Fall Prevention and Protection Plan. The plan must be site specific and address all fall hazards in the work place and during different phases of construction (Paragraph entitled FALL HAZARD PROTECTION AND PREVENTION PROGRAM). 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 prepare and sign the plan. See EM 385-1-1 for definitions of Competent and Qualified Person for Fall Protection. Include fall protection and prevention systems, equipment and methods employed for every phase of work, responsibilities, self-rescue, rescue and escape equipment and operations, evacuation procedures, training requirements, and monitoring methods. For Horizontal Lifelines, see EM 385-1-1, Chapter 21 and ANSI/ASSP Z359.1. Revise the Fall Protection and Prevention Plan 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 at the job site for the duration of the project.

k. Site Safety and Health Plan. The safety and health aspects prepared in accordance with EM 385-1-1.

l. Polychlorinated Biphenyls (PCB) Plan. The safety and health aspects of Polychlorinated Biphenyls work, prepared in accordance with EM 385-1-1, Chapter 6.

m. Excavation Plan. The safety and health aspects prepared in accordance with EM 385-1-1.

n. Crane Critical Lift Plans. Critical lifts require detailed planning and additional or unusual safety considerations. Before making a critical lift, develop a critical lift plan. Critical lifts are detailed in EM 385-1-1, Chapter 16. A non-mandatory Critical Lift Plan form can be found in EM 385-1-1, Chapter 16.

k. Critical Lifts are defined as:

(1) Lifts involving hazardous materials (e.g., explosives, highly volatile substances);

(2) Hoisting personnel with Load Handling Equipment (LHE);

(3) Lifts made with more than one LHE

(4) Lifts where the center of gravity could change;

(5) Lifts made when the load weight is 75 percent of the rated capacity of the LHE load chart or more (not applicable to gantry, overhead, or bridge cranes);

(6) Lifts without the use of outriggers using rubber tire load charts;

(7) Lifts using more than one hoist on the same LHE;

(8) Lifts involving Multiple Lift Rigging (MLR) Assemblies or other non-routine or technically difficult rigging arrangements;

(9) Lifts involving submerged loads.

Exception: if hand signals used by a signal person in view of the operator or radio communications are available and in use, load does not exceed two tons AND is determined a routine lift by the supervisor;

(10) Load Tests;

(11) When land-based LHE mounted on barges, pontoons or other means of flotation are required to travel while lifting the load;

(12) Any lift the operator believes should be considered critical.

o. Prepare and sign weight handling critical lift plans for lifts over 75 percent of the capacity of the crane or hoist (or lifts over 50 percent of the capacity of a barge mounted mobile crane's hoists) at any radius of lift; lifts involving more than one crane or hoist; lifts of personnel; and lifts involving non-routine rigging or operation, sensitive equipment, or unusual safety risks. Submit 15 calendar days prior to on-site work and include the requirements of EM 385-1-1, Chapter 16, ASME B30-PKG, and the following:

(1) For lifts of personnel, demonstrate compliance with the requirements of EM 385-1-1 in the plan.

(2) For barge mounted mobile cranes, perform a Naval Architectural Analysis (NAA) to determine barge stability calculations identifying barge list and trim based on anticipated loading; and load charts based on calculated list and trim. Calculate the amount of list and trim to be within the crane manufacturer's requirements.

p. Standard Lift Plan. For all crane activities prepare a written standard lift plan (SLP) 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 accordance with EM 385-1-1, Chapter 16.

q. Fatigue Management Plan (FMP). Complete a FMP as part of the APP whenever work hours:

(1) exceed 10 hours a day for more than four consecutive days;

(2) exceed 50-hours in a seven day work week;

(3) exceed 12-hours a day for more than three consecutive days, or

(4) exceed 58-hours a week for sedentary (to include office) work.

1.9 ACTIVITY HAZARD ANALYSIS (AHA)

1.9.1 General

a. Format the Activity Hazard Analysis (AHA) in accordance with EM 385-1-1. Submit the AHA for review at least 15 calendar days prior to the start of each phase. Format subsequent AHAs as amendments to the APP. Use the analysis during daily inspections to ensure the implementation and effectiveness of the activity's safety and health controls. Develop an AHA for every operation involving a type of work presenting hazards not experienced in previous project operations or where a new work crew or subcontractor is to perform work. The analysis must identify and evaluate hazards and outline the proposed methods and techniques for the safe completion of each phase of work. At a minimum, define activity being performed, sequence of work, specific safety and health hazards anticipated, control measures (to include personal protective equipment) to eliminate or reduce each hazard to acceptable levels, equipment to be used, inspection requirements, training requirements for all involved, and the Competent and Qualified Persons in charge of that phase of work. For work with fall hazards, include fall hazards associated with scaffold erection and removal, identify the appropriate fall arrest systems. For work with materials handling equipment, address safeguarding measures related to materials handling equipment. For work requiring excavations, include requirements for safeguarding excavations. For work on or near energized electrical equipment, address arc flash hazards and control procedures. For work with commissioning, address safeguarding measures related to commissioning.

b. An activity requiring an AHA cannot proceed until the AHA has been accepted by the CO and a meeting has been conducted by the Contractor to discuss its contents with everyone engaged in the activity, including on-site Government representatives. Document meeting attendance at the preparatory, initial, and follow-up phases of quality control inspection.

c. Continuously review and, when appropriate, modify the AHA to address changing site conditions or operations.

d. Develop the activity hazard analyses using the project schedule as the basis for the activities performed. Any activities listed on the project schedule will require an AHA. The AHAs will be developed by the Contractor, supplier, or subcontractor and provided to the Prime Contractor for submittal to the CO.

e. Contractor may use Job Hazard Analyses, Job Safety Analyses, or similar Risk Management procedures in lieu of an AHA, provided the data collected is the same as that required by the AHA.

1.9.2 Periodic AHA Review and Updating

Review the AHAs periodically (at least monthly) at the Contractor supervisory safety meeting and update when procedures, scheduling, or hazards change. The on-site superintendent, SSHO, and Competent Persons used to develop the AHAs, including updates, must sign and date the AHAs before they are implemented.

1.10 DISPLAY OF SAFETY INFORMATION

Within one calendar day after commencement of on-site work, erect a Safety and Health 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 CO, that is accessible and includes all mandatory information for employee and visitor review, will 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 2-8.f. Additional items required to be posted include:

a. Confined space entry permit.

b. Hot work permit.

c. Marine Chemist Certificate (Marine Activities).

1.11 SITE SAFETY REFERENCE MATERIALS

Maintain safety-related references applicable to the project, including those listed in Paragraph entitled REFERENCES. Maintain applicable equipment manufacturer's manuals.

1.12 EMERGENCY MEDICAL TREATMENT

Emergency medical treatment for Contract employees is the responsibility of the Contractor.

1.13 PROJECT SAFE CLEARANCE PROCEDURE

1.13.1 General

Prior to beginning work, submit a Hazardous Energy Control Plan in accordance with EM 385-1-1 and CENWP-OD-SAF-385-1. Ensure that each employee is familiar with and complies with the Lockout/Tagout Safe Clearance procedures in EM 385-1-1, CPL 02-00-147, ER 385-1-31, and Government-furnished Hazardous Energy Control Program Supplemental Procedures, as practiced by the U.S. Army Corps of Engineers, Portland District, CENWP-OD-SAF-385-1. Provide HEC instruction and training for personnel that have any involvement with electrical equipment or lines; mechanical equipment; pressure systems; and vessels and lines containing dangerous or hazardous material which can be energized, pressurized, activated, or released remotely or inadvertently. This requirement also applies to any interface of ongoing Project operations and local procedures. Coordinate all work requiring a clearance under EM 385-1-1 and Project Specific Safe Clearance Procedures with the Government at least 24 hours in advance. No work is to proceed until the proper

clearances have been obtained from the Government for the work authorized and the Contractor has signed and locked onto the principal authorized clearance. Where the requirements of this specification and referenced documents vary, the most stringent requirements apply.

1.13.2 Safe Clearance Procedure System

A safe clearance system is used by Project Personnel to ensure continuity of service and safety to personnel and equipment. Any work, service, or delivery performed which requires taking Project operating equipment out of service must be done only after a formal clearance is obtained through the Project POC. Do not violate clearance. Any violation of Safe Clearance Procedures will be grounds for removal of the offender(s) from the project. The use of locks and tags is required in the Projects Safe Clearance Procedure for all clearance points that locks can be applied. Where locks cannot be applied, apply Project Clearance Tags. The use of personal locks for individuals working under Safe Clearance is required by CPL 02-00-147 and CENWP-OD-SAF-385-1.

1.14 REPORTS

1.14.1 Accident Notification

Notify the CO as soon as practical, but no more than four hours, after any mishap meeting the definition of Recordable Injuries or Illnesses or High Visibility Mishap; meeting EM 385-1-1, Chapter 1, to include property damage equal to or greater than $5,000. In conjunction with Contract Clause 52.236-13 Alt I, ACCIDENT PREVENTION - ALTERNATE I, and EM 385-1-1, report to the Government monthly the total man-hours expended at the project site by all employees (supervisory as well as labor) together with those of all subcontractors. The reporting period will start at 12:01 a.m. the first day of each month and end as of midnight on the last day of each month. Report by telephone to the CO and Resident Engineer's office prior to the fifth day of the following month.

1.14.2 Accident or Mishap Reports

All accidents involving property damage, fires, personal equipment, and all injuries to the public, regardless of degree, must be reported to the CO and Resident Engineer on ENG Form 3394 and according to the schedule which follows:

a. Investigation and Reporting

(1) Conduct a mishap investigation for recordable injuries and illnesses, for Medical Treatment as defined in Paragraph DEFINITIONS, property damage accidents resulting in at least $5,000 in damages, and near misses as defined in EM 385-1-1, to establish the root cause(s) of the accident. Complete the accident or mishap reports form, ENG Form 3394, and provide the report to the CO within five calendar days of the accident.

(2) Conduct an accident investigation for any of the following High Visibility Mishap: (1) Electrical, (2) Load Handling Equipment and Rigging, (3) Fall-from-Height, (4) Underwater Diving to establish the root cause(s) of the accident. Make the initial report within four hours, and provide a completed ENG Form 3394 to the CO within five calendar days of the accident. Do not proceed with further operations until cause is determined and corrective

actions have been implemented to the satisfaction of the CO.

(3) The CO and Resident Engineer must be notified by the most expeditious means available of all fatal and permanent total disability injuries, three or more persons hospitalized, all property damage of $500,000 or more, and structural damage involving a question of structural adequacy. All incidents involving disabling injury or an injury which may result in an employee's lost time, or property damage of $5,000 or more must be reported to the CO and Resident Engineer by telephone as soon as possible and in all cases within four hours.

(4) In all accidents enumerated in sub-item (3), investigate the circumstances before the scene of the accident is changed, take corrective action, and within 48 hours forward to the CO and Resident Engineer four copies of ENG Form 3394.

(5) In the event of an accident involving a fatality, permanent total disability, hospitalization of one or more persons, or property damage of $500,000 or more, the Contractor must promptly suspend all operations at the scene of the accident and notify the CO and Resident Engineer of the occurrence. Immediately provide for the rescue and/or care of the injured. Restrict access to the area except in situations where safety may be compromised. Leave the scene undisturbed until investigated by a Government appointed board of investigation and until the Contractor is authorized to resume operations.

(6) If property damage and injury result from the same accident, the consequence may be noted on the same ENG Form 3394. If more than one person is injured in a single accident, ENG Form 3394 must be submitted for each person injured. The Resident Office staff will provide the required forms and assist in their preparation immediately upon notification of an accident.

b. Types of Accidents and Reports. For each accident that results in a consequence or combination of the consequences listed below, a complete report on ENG Form 3394 must be furnished to the CO and Resident Engineer. Please note that these reports cannot be used for any purpose other than accident reporting.

(1) Disabling injury (including death) is an injury that renders a person unable to perform a regularly established job on the day following the injury or on any subsequent day. Known suicide or deaths from natural causes are not reportable.

(2) Damage of $5,000 or more to the Contractor's property or equipment, including motor vehicles and fire and/or damage to other property caused by the Contractor while executing the Contract.

(3) Accidents occasioned by flood, hurricane, tornado, fire, navigation, wind, ice, etc., and structural failure in excess of $5,000.

1.14.3 Crane Testing Reports

Submit crane inspection reports required in accordance with Chapter 16 of EM 385-1-1, ASME B30-PKG, and as specified herein with the daily reports

of inspections.

1.14.4 Certificate of Compliance

Provide a Certificate of Compliance for each crane entering an activity under this Contract (see CO for a blank certificate). State within the certificate that the crane and rigging gear meet applicable OSHA regulations (with the Contractor citing which OSHA regulations are applicable, e.g., cranes used in construction, demolition, or maintenance comply with 29 CFR 1926 and EM 385-1-1 Chapter 16. Certify on the Certificate of Compliance that the crane operator(s) is qualified and trained in the operation of the crane to be used. Also certify that all of its crane operators have been trained in the proper use of all safety devices (e.g., anti-two block devices). Post certifications on the crane.

1.15 HOT WORK

a. Submit and obtain a written permit prior to performing "Hot Work" (i.e. welding or cutting, etc.) or operating other flame-producing/spark producing devices. Submit one copy of each permit attached to each Daily Contractor Quality Control Report (Section 01 45 00.00 25 QUALITY CONTROL. Contractors are required to meet all criteria before a permit is issued. In accordance with EM 385-1-1, a fully charged fire extinguisher, minimum ten lbs. are required to be readily available in the immediate area of Hot Work. All extinguishers must have current inspection tag, approved safety pin, and tamper resistant seal. It is also mandatory to have a designated FIRE WATCH for any "Hot Work" done. Train the Fire Watch in accordance with NFPA 51B and remain on-site for a minimum of 60 minutes after completion of the task or as specified on the hot work permit.

b. When starting work in the facility, require personnel to familiarize themselves with the location of the nearest fire alarm boxes and know the emergency phone number. Report any fire, no matter how small, to the Fire Department and CO immediately.

1.16 FACILITY OCCUPANCY CLOSURE

Streets, walks, and other facilities occupied and used by the Government are prohibited be closed or obstructed without written permission from the CO.

1.17 INCLEMENT WEATHER AND HEAT/COLD STRESS MANAGEMENT

In the event of a severe storm warning:

a. Secure outside equipment and materials and place materials that could be damaged in protected areas.

b. Check surrounding area for loose material, equipment, debris, and other objects that could be blown away or against existing work.

c. Ensure that temporary erosion controls are adequate.

d. Provide an INCLEMENT WEATHER AND HEAT/COLD STRESS MANAGEMENT PLANS for removing or securing plant and evacuation of personnel for floating plants in emergencies. Include this plan as part of the the AHA and meet the requirements of EM 385-1-1.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 CONSTRUCTION AND OTHER WORK

3.1.1 General

Comply with EM 385-1-1, NFPA 241, ASME B30-PKG, the APP, the AHA, Federal and/or State OSHA regulations, and other related submittals and activity fire and safety regulations. The most stringent standard will prevail.

3.1.2 Hazardous Material Exclusions

Not withstanding 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, and lead-based paint are prohibited. The CO, upon written request by the Contractor, may consider exceptions to the use of any of the above excluded materials.

3.1.3 Unforeseen Hazardous Material

The design should have identified materials such as PCB, lead-based paint, friable and non-friable asbestos, and other OSHA regulated chemicals (i.e. 29 CFR 1910). If material, not indicated, that may be hazardous to human health upon disturbance during construction operations is encountered, stop that portion of work and notify the CO 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 Contract Clauses 52.243-4, CHANGES, and 52.236-2, DIFFERING SITE CONDITIONS.

3.2 FALL HAZARD PROTECTION AND PREVENTION PROGRAM

3.2.1 General

Designate a Competent or Qualified Person for Fall Protection to establish, prepare, and sign a fall protection and prevention (FP&P) plan for the protection of all employees exposed to fall hazards in accordance with ANSI/ASSP Z359.1 and EM 385-1-1. Establish a fall protection and prevention program, for the protection of all employees exposed to fall hazards. The plan will include: company policy, identify responsibilities, qualifications, 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; and submit in the APP. Use definitions and nomenclature in accordance with ANSI/ASSP Z359.1. Identify Competent/Qualified Persons, as required, for fall protection and maintain a list of current certificates and completed training courses for each person. Qualified and Competent Persons (See EM 385-1-1) requirements are

as follows:

a. A Qualified Person must have a recognized degree or professional certificate that relates to fall protection and rescue and with extensive knowledge, training, and experience in the fall protection and rescue field and capable of designing, analyzing, evaluating, specifying, inspecting, and assembling fall protection and rescue equipment and systems. The Qualified Person must also have working knowledge of current fall protection regulations and standards, physical sciences, engineering principles, and meet the qualifications of a Competent Person.

b. A Competent Person, designated in writing by the Contractor, will be responsible for the immediate supervision, implementation, and monitoring of the Contractor's managed Fall Hazard Protection and Prevention Program, who through training and knowledge in the fall protection and rescue field, is capable of identifying, evaluating, and addressing existing and potential fall hazards, and who has the authority to take necessary corrective measures. To be qualified as a Competent Person for Fall Protection, the individual must have a minimum of 24 hours of Competent Person for Fall Protection training, with a combination of formal classroom and practical documented training. Training will be performed by a Competent Person training or a Qualified Person trainer conforming to the requirements of ANSI/ASSP Z490.1, Criteria for Accepted Practices in Safety, Health and Environmental Training. In addition, conduct Competent Person refresher training at least every two years to stay current with fall protection and rescue educational industry requirements, or when new fall protection systems are used or installed, or new fall hazards are encountered per ANSI/ASSP Z359.1. A Qualified Person may perform the duties and responsibilities of a Competent Person if their training meets the above minimum training requirements.

3.2.2 Fall Protection Equipment and Systems

3.2.2.1 General

Enforce use of the fall protection equipment and systems designated for each specific work activity in the Fall Protection and Prevention Plan and/or 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, Chapter 21. In addition to the required fall protection systems, safety skiff, personal floatation devices, and life rings etc., are required when working above or next to water in accordance with EM 385-1-1, Chapters 05 and 21. Personal fall arrest systems are required when working from an articulating or extendible boom, swing stages, or suspended platforms. Safety requirements for work platforms suspended from cranes or derricks must comply with ASSP A10.28. In addition, personal fall restraint systems are required when operating other equipment such as scissor lifts. Fall protection must comply with EM 385-1-1, and ANSI/ASSP Z359.1.

3.2.2.2 Personal Fall Arrest Equipment

Personal fall arrest equipment, systems, subsystems, and components must meet ANSI/ASSP Z359.1. Only a full-body harness with a shock-absorbing lanyard or self-retracting lanyard is an acceptable personal fall arrest body support device. Body belts are prohibited, to include use in Fall Restraint. 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. Only locking snap hooks and carabiners may be used meeting the 3,600 lb. gate strength requirement. Webbing, straps, and ropes must be made of synthetic fiber. The maximum free fall distance when using fall arrest equipment cannot exceed six feet. The total fall distance and any swinging of the worker (pendulum-like motion) that can occur during a fall must always be taken into consideration when attaching a person to a fall arrest system. All harnesses must be equipped with Trauma Suspension Straps or similar to provide short-term relief from the effects of orthostatic intolerance. Equip all energy absorbers with a deployment indicator.

3.2.3 Existing Anchorage

Existing anchorages, to be used for attachment of personal fall arrest equipment, must be certified (or re-certified) by a Qualified Person for fall protection in accordance with ANSI/ASSP Z359.1. Exiting horizontal lifeline anchorages must be certified (or re-certified) by a registered professional engineer with experience in designing horizontal lifeline systems.

3.2.4 Horizontal Lifelines

Design, install, certify, and use under the supervision of a Qualified Person horizontal lifelines for fall protection as part of a complete fall arrest system in compliance with ANSI/ASSP Z359.1 and EM 385-1-1, Chapter 21.

3.2.5 Guardrails and Safety Nets

Design, install, and use guardrails and safety nets in accordance with EM 385-1-1, Chapters 21 and 19 (Marine).

3.2.6 Rescue and Evacuation 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; 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 AHA for the phase of work, in the FP&P Plan, and the APP.

3.2.7 Aerial Lift Equipment and Movable Work Platforms

In addition to the guardrail provided, equip equipment with anchorages meeting ANSI/ASSP Z359.1. A restraint system must be used in addition to guardrails and the lanyards sufficiently short to prohibit workers from climbing out of, or being ejected from the platform.

3.2.8 Safety Monitoring System

The use of a safety monitoring system as a fall protection method is prohibited.

3.2.9 Controlled Access Zones

The use of Controlled Access Zones as a fall protection method is prohibited.

3.3 SCAFFOLDING

a. 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. Access to scaffold platforms greater than 20 feet in height must be accessed by use of a scaffold stair system. Do not use vertical ladders commonly provided by scaffold system manufacturers for accessing scaffold platforms greater than 20 feet in height. The use of an adequate gate is required. Ensure that employees are qualified to perform scaffold erection and dismantling. Do not use scaffold without the capability of supporting at least four times the maximum intended load or without appropriate fall protection as delineated in the accepted fall protection and prevention plan. Attach stationary scaffolds to structural building components to safeguard against tipping forward or backward. Special care must be given to ensure scaffold systems are not overloaded. 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 four times the width of the smallest dimension of the scaffold base. Place work platforms on mud sills. Scaffold or work platform erectors must have fall protection during the erection and dismantling of scaffolding or work platforms that are more than six feet. Delineate fall protection requirements when working above six feet or above dangerous operations in the Fall Protection and Prevention (FP&P) Plan and Activity Hazard Analysis (AHA) for the phase of work.

b. Scaffold must comply in every respect with EM 385-1-1. Submit type, layout, connections, and product literature for any scaffolding, ladder, stairway, or other access schemes proposed to be used. Install approved anti-slip surface material on scaffolding platforms.

3.4 EQUIPMENT

3.4.1 Load Handling Equipment (LHE)

Load Handling Equipment (LHE) must comply with ASME B30-PKG and the following:

a. Do not modify Load Handling Equipment such as forklifts with work platform attachments for supporting employees unless specifically delineated in the manufacturer's printed operating instructions.

b. The use of hooks on equipment for lifting of material must be in accordance with manufacturer's printed instructions.

c. Operators of forklifts or power industrial trucks must be licensed in accordance with OSHA.

3.4.2 Cranes, Hoists, and Rigging

a. LHE as specified in EM 385-1-1, Chapter 16.

b. Comply with the LHE manufacturer's specifications and limitations for erection and operation of LHE used in support of the work. Perform erection under the supervision of a designated person (as defined in ASME B30-PKG). Perform all testing in accordance with the manufacturer's recommended procedures.

c. Comply with ASME B30-PKG, OSHA and the EM 385-1-1 for all cranes.

d. When operating in the vicinity of overhead transmission lines, operators and riggers be alert to this special hazard and follow the requirements of EM 385-1-1, Chapter 11, and ASME B30-PKG.

e. Do not use personnel work platforms (man-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. Hoisting personnel must be allowed by the LHE Manufacturer. This activity is a critical lift and a critical lift plan is required.

f. Inspect, maintain, and recharge portable fire extinguishers as specified in NFPA 10, Standard for Portable Fire Extinguishers.

g. All employees must keep clear of loads about to be lifted and of suspended loads.

h. Use cribbing when performing lifts on outriggers.

i. Position the LHE hook/block directly over the load. Side loading of LHE is prohibited unless allowed by the manufacturer.

j. Position a physical barricade to prevent personnel from entering the counterweight swing (tail swing) area of the crane.

k. Certification records which include the date of inspection, signature of the person performing the inspection, and make the serial number or other identifier of the LHE that was inspected available onsite at all times.

l. Written reports listing the load test procedures used along with any repairs or alterations performed on the crane must be available onsite.

m. Certify that all LHE operators have been trained in proper use of the equipment they are authorized by type, class and capacity.

n. Certify that all LHE meet the manufactures requirements by completing and submitting the certification of compliance (COC)for in the EM 385-1-1 prior to the start of work.

o. A physical if required by the EM 385-1-1, and must be signed by a Medical Doctor (MD) or Doctor of Osteopathy (DO), for all LHE operators.

p. Plan all lifts with LHE in advance by developing a Standard lift plan (SLP) per the EM 385-1-1.

3.5 EXCAVATIONS

3.5.1 Soil Classification

Perform soil classification by a Competent Person in accordance with EM 385-1-1.

3.5.2 Utility Locations

All underground utilities in the work area must be positively identified by a third party, independent, private utility locating company in addition to any station locating service and coordinated with the station utility department.

3.5.3 Utility Location Verification

Physically verify underground utility locations, including utility depth, by hand digging using wood or fiberglass handled tools when any adjacent construction work is expected to come within three feet of the underground system.

3.5.4 Utilities Within and Under Concrete, Bituminous Asphalt, and Other Impervious Surfaces

Utilities located within and under concrete slabs or pier structures, bridges, parking areas, and the like, are extremely difficult to identify. Whenever Contract work involves chipping, saw cutting, or core drilling through concrete, bituminous asphalt or other impervious surfaces, the existing utility location must be coordinated with station utility departments in addition to location and depth verification by a third party, independent, private locating company. The third party, independent, private locating company must locate utility depth by use of Ground Penetrating Radar (GPR), X-ray, bore scope, or ultrasound prior to the start of demolition and construction. Use outages to isolate utility systems in circumstances where utilities are unable to be positively identified. The use of historical drawings does not alleviate the Contractor from meeting this requirement.

3.6 ELECTRICAL

3.6.1 Conduct of Electrical Work

Certify underground electrical spaces safe for entry before entering to conduct work. Positively identify cables that will be cut, and de-energize prior to performing each cut. Positive cable identification must be made prior to submitting any outage request for electrical systems. Arrangements are to be coordinated with the CO and Station Utilities for identification. The CO will not accept an outage request until the Contractor satisfactorily documents that the circuits have been clearly identified. 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 will be 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 must be permitted to enter. When work requires Contractor to work near energized circuits as defined by the NFPA 70, high voltage personnel must use personal protective equipment that includes, as a minimum, electrical hard hat, safety shoes, insulating gloves with leather protective sleeves, fire retarding shirts, coveralls, face shields, and safety glasses. In addition, provide 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.

3.6.2 Arc Flash Hazard (AFH) Program

a. Develop an AFH Program as described in ER 385-1-100. The AFH Program, at a minimum, must:

(1) Be supplemental to Engineering Regulations

(2) Identify an AFH Coordinator

(3) Identify AFH Qualified Personnel

(4) Identify personnel roles and responsibilities

(5) Provide details on and contain AFH analyses

(6) Procedures to address DC, single-phase and high voltage

(7) Define appropriate hazard mitigation

(8) Provide for integration of controls into work activities

(9) Provide Personal Protective Equipment (PPE) policies and procedures

(10) Describe labeling procedures

(11) Provide training procedures and methods

(12) Describe inspections and program review procedures

(13) Detail mishap reporting procedures

(14) Describe documentation and recordkeeping procedures

(15) Be made available to all personnel with potential exposure to AFHs

(16) Include provisions:

(a) that violators of the policy will be subject to appropriate disciplinary action

(b)for reporting violations of AFH Program and/or procedures

(17) Include facility-specific information

b. Prior to beginning work on any equipment where an AFH exists, attend a coordination meeting with the CO and the Government AFH coordinator to review the Contractor AFH Program.

3.7 WORK IN CONFINED SPACES

Comply with the requirements in Chapter 34 of EM 385-1-1, OSHA 29 CFR 1915 (marine works), 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.

a. Entry Procedures - 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 EM 385-1-1, for entry procedures. Review all hazards pertaining to the space with each employee during review of the AHA.

b. Forced air ventilation is required for all confined space entry operations and the minimum air exchange requirements must be maintained to ensure exposure to any hazardous atmosphere is kept below its' action level.

c. Ensure the use of rescue and retrieval devices in confined spaces greater than five feet in depth. Conform to Chapter 34 of EM 385-1-1.

d. Sewer wet wells require continuous atmosphere monitoring with audible alarm for toxic gas detection.

e. Include training information for employees who will be involved as entrants and attendants for the work. Conform to Chapter 34 of EM 385-1-1.

f. Post the confined space entry permit in a conspicuous place close to the confined space entrance.

3.8 CRYSTALLINE SILICA

Grinding, abrasive blasting, and foundry operations of construction materials containing crystalline silica, must comply with OSHA regulations, such as 29 CFR 1910.94, and EM 385-1-1, Chapter 6. Develop and implement effective exposure control and elimination procedures to include dust control systems, engineering controls, and establishment of work area boundaries, as well as medical surveillance, training, air monitoring, and personal protective equipment.

3.9 DUST CONTROL

In addition to the dust control measures required elsewhere in the Contract documents, dry cutting of brick or masonry is prohibited. Address control of water runoff for wet cutting.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 42 00

SOURCES FOR REFERENCE PUBLICATIONS

PART 1 GENERAL

1.1 REFERENCES
1.2 ORDERING INFORMATION

PART 2 PRODUCTS

PART 3 EXECUTION

-- End of Section Table of Contents --

SECTION 01 42 00

SOURCES FOR REFERENCE PUBLICATIONS

PART 1 GENERAL

1.1 REFERENCES

Various publications are referenced in other sections of the specifications to establish requirements for the work. These references are identified in each section by document number, date and title. The document number used in the citation is the number assigned by the standards producing organization (e.g., ASTM B564 Standard Specification for Nickel Alloy Forgings). However, when the standards producing organization has not assigned a number to a document, an identifying number has been assigned for reference purposes.

1.2 ORDERING INFORMATION

The addresses of the standards publishing organizations whose documents are referenced in other sections of these specifications are listed below, and if the source of the publications is different from the address of the sponsoring organization, that information is also provided.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)
555 12th Street NW, Suite 1000
Washington, DC 20004
Ph: 202-624-5800
Fax: 202-624-5806
E-Mail: info@aashto.org
Internet: https://www.transportation.org/

AMERICAN GEAR MANUFACTURERS ASSOCIATION (AGMA)
1001 N. Fairfax Street, Suite 500
Alexandria, VA 22314-1587
Ph: 703-684-0211
Fax: 703-684-0242
E-mail: tech@agma.org
Internet: https://www.agma.org/

AMERICAN SOCIETY FOR NONDESTRUCTIVE TESTING (ASNT)
1201 Dublin Road Suite G04

Columbus, OH 43215-1045
Ph: 800-222-2768 or 614-274-6003

E-mail: customersupport@asnt.org
Internet: https://www.asnt.org/

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)
Two Park Avenue
New York, NY 10016-5990
Ph: 800-843-2763
Fax: 973-882-1717
E-mail: customercare@asme.org

Internet: https://www.asme.org/

AMERICAN SOCIETY OF SAFETY PROFESSIONALS (ASSP)
520 N. Northwest Highway
Park Ridge, IL 60068
Ph: 847-699-2929
E-mail: customerservice@assp.org
Internet: https://www.assp.org/

AMERICAN WELDING SOCIETY (AWS)
8669 NW 36 Street, #130
Miami, FL 33166-6672
Ph: 800-443-9353
Email: customercare@aws.org
Internet: https://www.aws.org/

ASTM INTERNATIONAL (ASTM)
100 Barr Harbor Drive, P.O. Box C700
West Conshohocken, PA 19428-2959
Ph: 610-832-9500
Fax: 610-832-9555
E-mail: service@astm.org
Internet: https://www.astm.org/

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)
445 and 501 Hoes Lane
Piscataway, NJ 08854-4141
Ph: 732-981-0060 or 800-701-4333
Fax: 732-981-9667
E-mail: onlinesupport@ieee.org
Internet: https://www.ieee.org/

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)
ISO Central Secretariat
BIBC II
Chemin de Blandonnet 8
CP 401 - 1214 Vernier, Geneva
Switzerland
Ph: 41-22-749-01-11
E-mail: central@iso.ch
Internet: https://www.iso.org

INTERNATIONAL SAFETY EQUIPMENT ASSOCIATION (ISEA)
1101 Wilson Blvd, Suite 1425
Arlington, VA 22209-1762
Ph: 703-525-1695
Fax: 703-528-2148
Internet: https://safetyequipment.org/

MANUFACTURERS STANDARDIZATION SOCIETY OF THE VALVE AND FITTINGS INDUSTRY (MSS)
127 Park Street, NE
Vienna, VA 22180-4602
Ph: 703-281-6613
E-mail: info@msshq.org
Internet: http://msshq.org

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
1 Batterymarch Park
Quincy, MA 02169-7471
Ph: 800-344-3555
Fax: 800-593-6372
Internet: https://www.nfpa.org

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)
Patriots Plaza 1
395 E Street, SW, Suite 9200
Washington, DC 20201
Ph: 800-232-4636
Fax: 513-533-8347
Internet: https://www.cdc.gov/niosh/

RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RCSC)
E-Mail: info@boltcouncil.org
Internet: http://www.boltcouncil.org

SOCIETY FOR PROTECTIVE COATINGS (SSPC)
800 Trumbull Drive
Pittsburgh, PA 15205
Ph: 877-281-7772 or 412-281-2331
Fax: 412-444-3591
E-mail: customerservice@sspc.org
Internet: http://www.sspc.org

U.S. ARMY CORPS OF ENGINEERS (USACE)
CRD-C DOCUMENTS available on Internet:
http://www.wbdg.org/ffc/army-coe/standards
Order Other Documents from:
Official Publications of the Headquarters, USACE
E-mail: hqpublications@usace.army.mil
Internet: http://www.publications.usace.army.mil/
or
https://www.hnc.usace.army.mil/Missions/Engineering-Directorate/TECHINFO/
U.S. ARMY CORPS OF ENGINEERS - PORTLAND DISTRICT (NWP)
P.O. BOX 2870
PORTLAND, OR 97208-2870
Ph: 503-808-3800
Internet: https://www.nwd.usace.army.mil/

U.S. DEPARTMENT OF DEFENSE (DOD)
Order DOD Documents from:
Room 3A750-The Pentagon
1400 Defense Pentagon
Washington, DC 20301-1400
Ph: 703-571-3343
Fax: 215-697-1462
E-mail: customerservice@ntis.gov
Internet: https://www.ntis.gov/
Obtain Military Specifications, Standards and Related Publications from:
Acquisition Streamlining and Standardization Information System (ASSIST)
Department of Defense Single Stock Point (DODSSP)
Document Automation and Production Service (DAPS)
Building 4/D

700 Robbins Avenue
Philadelphia, PA 19111-5094
Ph: 215-697-6396 - for account/password issues
Internet: https://assist.dla.mil/online/start/; account registration required
Obtain Unified Facilities Criteria (UFC) from:
Whole Building Design Guide (WBDG)
National Institute of Building Sciences (NIBS)
1090 Vermont Avenue NW, Suite 700
Washington, DC 20005
Ph: 202-289-7800
Fax: 202-289-1092
Internet:
https://www.wbdg.org/ffc/dod/unified-facilities-criteria-ufc

U.S. DEPARTMENT OF LABOR
200 Constitution Ave NW
Washington, DC 20210
Ph: 1-866-487-2365
Internet: https://www.dol.gov/

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)
1200 Pennsylvania Avenue, N.W.
Washington, DC 20004
Ph: 202-564-4700
Internet: https://www.epa.gov
--- Some EPA documents are available only from:
National Technical Information Service (NTIS)
5301 Shawnee Road
Alexandria, VA 22312
Ph: 703-605-6060 or 1-800-363-2068
Fax: 703-605-6880
TDD: 703-487-4639
E-mail: info@ntis.gov
Internet: https://www.ntis.gov/

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)
8601 Adelphi Road
College Park, MD 20740-6001
Ph: 866-272-6272
Internet: https://www.archives.gov/
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PART 2 PRODUCTS

Not used

PART 3 EXECUTION

Not used

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 45 00.00 25

QUALITY CONTROL

PART 1 GENERAL

1.1 REFERENCES
1.2 SUBMITTALS
1.3 LABORATORY VALIDATION
1.4 PAYMENT

PART 2 PRODUCTS

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS
3.1.1 Quality Control System
3.1.2 Project Superintendent
3.2 CONTRACTOR QUALITY CONTROL PLAN
3.2.1 Content of the CQC Plan
3.2.2 Acceptance of CQC Plan
3.2.3 Notification of Changes
3.3 COORDINATION MEETING
3.4 QUALITY CONTROL ORGANIZATION
3.4.1 Personnel Requirements
3.4.2 CQC System Manager Qualifications
3.4.3 CQC Specialized Personnel
3.4.4 Construction Quality Management for Contractors
3.4.5 Organizational Changes
3.5 FAILURE TO COMPLETE PERSONNEL DUTIES
3.6 SUBMITTALS AND DELIVERABLES
3.7 QUALITY CONTROL
3.7.1 Preparatory Phase
3.7.2 Initial Phase
3.7.3 Follow-up Phase
3.7.4 Additional Preparatory and Initial Phases
3.8 TESTS
3.8.1 Testing Procedure
3.8.2 Testing Laboratories
3.8.3 Onsite Laboratory
3.8.4 Furnishing or Transportation of Samples for Testing
3.9 COMPLETION INSPECTION
3.9.1 Punch-Out Inspection
3.9.2 Pre-Final Inspection
3.9.3 Final Acceptance Inspection
3.10 DOCUMENTATION
3.11 NOTIFICATION OF NONCOMPLIANCE

-- End of Section Table of Contents --

SECTION 01 45 00.00 25

QUALITY CONTROL

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 C1077	(2025a) Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
ASTM C1093	(2022) Standard Practice for Accreditation of Testing Agencies for Masonry
ASTM D3666	(2016) Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials
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	(2025a) Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection

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. The following must be submitted in accordance with Section 01 33 00, SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Contractor Quality Control Plan; G

Construction Quality Management for Contractors

1.3 LABORATORY VALIDATION

For tests performed under this Contract, use a testing laboratory validated by the Corps of Engineers Material Testing Center (MTC). See Paragraph entitled TESTS.

1.4 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control system, and all associated costs will be included in the applicable unit prices or lump-sum prices contained in the Price Schedule.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

3.1.1 Quality Control System

Establish and maintain an effective quality control (QC) system in compliance with FAR 52.246-12, INSPECTION OF CONSTRUCTION. The quality control system must consist of plans, procedures, and organization necessary to produce an end product which complies with the Contract requirements. The QC system must cover all construction operations, both onsite and offsite, and be keyed to the proposed construction sequence.

3.1.2 Project Superintendent

Identify an individual, within the onsite work organization, as Project Superintendent. The Project Superintendent must be a Journeyman with a minimum of five years experience in a verifiable Project Superintendent role on jobs similar to this Contracts. The designated Project Superintendent must be acceptable to the CO. The Project Superintendent must be held responsible for the quality of work on the job and is subject to removal by the Contracting Officer (CO) 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 must maintain a physical presence at the site at all times, except as otherwise acceptable to the CO, and must be responsible for all construction and construction related activities at the site. The Project Superintendent must have no other duties; they may not perform the duties of an equipment operator, flagger, laborer, or any other position. Identify an alternate for the Project Superintendent to serve in the event of the Project Superintendent's absence and/or to cover work performed on additional shift. The requirements for the alternate are the same as the designated Project Superintendent.

3.2 CONTRACTOR QUALITY CONTROL PLAN

Submit no later than 30 days after receipt of Notice to Proceed, the Contractor Quality Control (CQC) Plan proposed to implement the requirements of FAR 52.246-12, INSPECTION OF CONSTRUCTION. The Government will consider an interim plan for the first ten 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 features of work included in an accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional features of 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, purchasing agents:

a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff must implement the three phase control system for all aspects of the work specified. Include in the staff a CQC System Manager.

b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function; see Paragraph entitled QUALITY CONTROL ORGANIZATION.

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 must be issued by the CQC System Manager. Copies of these letters must be furnished to the Government.

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. (Use laboratory facilities approved by the CO.)

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 may be identified by different trades or disciplines, or it may be work by the same trade in a different environment. Although each Section of the specifications may 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 CQC Plan

Acceptance of the CQC 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 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 CO in writing of any proposed change. Proposed changes are subject to acceptance by the CO.

3.3 COORDINATION MEETING

After the Preconstruction Conference, before start of construction and prior to acceptance by the Government of the CQC Plan, the Contractor must meet with the CO and discuss the Contractor's quality control system. Submit the CQC Plan for review a minimum of 10 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 and signed by both the Contractor and the CO and will become a part of the Contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures which may require corrective action by the Contractor.

3.4 QUALITY CONTROL ORGANIZATION

3.4.1 Personnel Requirements

The requirements for the CQC organization are a CQC System Manager and sufficient number of additional qualified personnel to ensure Contract compliance. Personnel identified in the technical provisions as requiring specialized skills to assure the required work is being performed properly must be included as part of the CQC organization. The Contractor's CQC staff must maintain 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. All CQC staff members must be subject to acceptance by the CO. Promptly complete and furnish all letters, material submittals, shop drawing submittals, schedules, and all other project documentation to the CQC organization. The CQC organization must maintain these documents and records at the site at all times, except as otherwise acceptable to the CO.

3.4.2 CQC System Manager Qualifications

Identify an individual, within the onsite work organization, as CQC System Manager who must be responsible for writing and executing a complete CQC plan, overall management of CQC, and have the authority to act in all CQC matters for the Contractor. The CQC System Manager must have a minimum of five years of experience in a verifiable CQC role on jobs similar to this Contract. This CQC System Manager must be on the site at all times during construction and be employed by the Prime Contractor. The CQC System Manager must be assigned no other duties. Identify in the plan an alternate for the CQC System Manager to serve in the event of the CQC System Manager's absence and/or to cover work performed on additional

shifts. The requirements for the alternate are the same as the designated CQC System Manager.

3.4.3 CQC Specialized Personnel

In addition to CQC personnel specified elsewhere in the Contract, provide as part of the CQC organization specialized personnel to assist the CQC System Manager for the following areas: electrical, mechanical, if the CQC manager is not qualified to cover these areas at the discretion of the CO. These individuals may be employees of the Prime or subcontractor; must be responsible to the CQC System Manager; be physically present at the construction site during work on their areas of responsibility; must have five years of experience in a verifiable CQC role on jobs similar to this contract; and must be a graduate engineer, journeyman, or licensed in their own discipline. These individuals may perform other duties but must be allowed sufficient time to perform their assigned quality control duties as described in the Quality Control Plan.

3.4.4 Construction Quality Management for Contractors

The CQC System Manager and Alternate CQC System Manager must have successfully completed the course entitled "Construction Quality Management For Contractors." This course is periodically offered by the Associated Builders and Constructors, Inc., or Associated General Contractor, Inc. and must be retaken every five years. The course has been coordinated with the Navy and certificates from the Navy will be accepted. For further information regarding courses in the Portland area contact: Associated General Contractors, Oregon-Columbia Chapter at (503) 682-3363 or http://www.agc-oregon.org/education-and-training/army-corps-of-engineers/. Furnish documentation that the Contractor Quality Control System Manager has completed the course.

3.4.5 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 CO for acceptance.

3.5 FAILURE TO COMPLETE PERSONNEL DUTIES

Superintendent and QC Manager are subject to dismissal if the above duties are not being effectively carried out. If the Superintendent and QC Manager 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.

3.6 SUBMITTALS AND DELIVERABLES

Submittals, if needed, must comply with the requirements in Section 01 33 00, SUBMITTAL PROCEDURES. The CQC organization must be responsible for certifying that all submittals and deliverables are in compliance with Contract requirements.

3.7 QUALITY CONTROL

Contractor Quality Control 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

(Preparatory, Initial, and Follow-up) of control must be conducted by the CQC System Manager for each definable feature of the construction work as follows:

3.7.1 Preparatory Phase

This phase must be 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. Review 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/or 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. Physical 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 CO.

j. Discussion of the initial control phase.

k. Notify the Government at least 24 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. The CQC System Manager must prepare and document the results of the preparatory phase actions by separate minutes, and attach to the daily CQC report. Instruct applicable workers as to the acceptable level of workmanship required in order to meet Contract specifications.

3.7.2 Initial Phase

This phase must be 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.

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. Notify the Government at least 24 hours in advance of beginning the initial phase. Document separate minutes of this phase, prepared by the CQC System Manager, and attach to the daily CQC report. Indicate exact location of initial phase for future reference and comparison with follow-up phases.

g. Repeat the initial phase for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

3.7.3 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 daily 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.

3.7.4 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.

3.8 TESTS

3.8.1 Testing Procedure

Perform specified or required tests to verify that control measures are adequate to provide a product that conforms to Contract requirements. Report all test results using industry standard forms at the frequency specified in the Contract. Upon request, furnish to the Government duplicate samples of test specimens for QA verification testing by the Government. Procure the services of a Corps of Engineers approved testing laboratory, as described in Subparagraph entitled TESTING LABORATORIES, 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. Include Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test. If approved by the CO, actual test reports may be 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 CO. Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this Contract.

3.8.2 Testing Laboratories

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.

a. Validation. The validation of a testing laboratory is site-specific and cannot be transferred to a facility at a different location. Costs for validation by the Corps of Engineers MTC must be borne by the laboratory and/or the Contractor. Validation is granted only for the specific testing procedures requested to be validated. The laboratory may select the testing procedures to be validated, except for the Quality Assurance requirements of the applicable ASTM standards listed in this Paragraph.

b. Validation Procedures. Validation of a testing laboratory consists of either an inspection or audit, as defined below:

(1) Inspection must be performed by the MTC to verify compliance with the applicable provisions of ASTM C1077, ASTM C1093, ASTM D3666, ASTM D3740, and ASTM E329.

(2) An audit would be performed by the MTC in lieu of an inspection for laboratories holding a current AASHTO accreditation. Inspection by the MTC may be required after auditing if critical testing procedures required in the Contract were not included in the applicable CCRL or AMRL inspections.

c. Validation Schedule. For aggregate, concrete, bituminous materials, soil, rock, riprap, and metal components, the frequency of validation inspections or audits is once every two years. For water quality and sediment testing the validation schedule is every 18 months. When conditions change substantially from the time of the last validation, laboratories must be re-validated.

d. Validation Process. For information on the validation process and costs contact the MTC at (601) 634-2496. Procedures for validation,

including forms requesting validation may be obtained from the MTC web site at: https://mtc.erdc.dren.mil/. The Contractor is cautioned that the validation process is lengthy and that it requires immediate action. Keep the CO informed about the validation process as it proceeds in a timely manner.

3.8.3 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.

3.8.4 Furnishing or Transportation of Samples for Testing

Costs incidental to the transportation of samples or materials must be borne by the Contractor. Samples of materials for test verification and acceptance testing by the Government must be delivered to the Portland District contract commercial Laboratory in the District area. Coordination for each specific test, exact delivery location, and dates must be made through the Portland District Resident Office.

3.9 COMPLETION INSPECTION

3.9.1 Punch-Out Inspection

The CQC Manager must conduct an inspection of the work near the end of the work, or any increment of the work established by a time stated in the specifications, or the FAR 52.211-10, COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK. As required by Paragraph DOCUMENTATION, prepare and include in the CQC documentation a punch list of items which do not conform to the approved drawings and specifications. Include within the list of deficiencies the estimated date by which the deficiencies will be corrected. The CQC System Manager or staff must make a second inspection 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.

3.9.2 Pre-Final Inspection

The Government will perform the pre-final inspection to verify that the work is complete. A Government Pre-Final Punch List may be developed as a result of this inspection. The Contractor's CQC System Manager must 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 must 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.

3.9.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the CO must 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 may also be in attendance. The final acceptance inspection will be formally scheduled by

the CO based upon results of the Pre-Final inspection. Notify the CO 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 CO to bill the Contractor for the Government's additional inspection cost in accordance with FAR 52.246-12, INSPECTION OF CONSTRUCTION.

3.10 DOCUMENTATION

Daily CQC Report:

a. Maintain current records providing factual evidence that required quality control activities and/or 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:

(1) Contractor/subcontractor and their area of responsibility.

(2) Operating plant/equipment with hours worked, idle, or down for repair.

(3) 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.

(4) Test and/or control activities performed with results and references to specifications/drawings requirements. Identify the control phase (Preparatory, Initial, or Follow-up). List of deficiencies noted, along with corrective action.

(5) Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.

(6) Submittals and deliverables reviewed, with Contract reference, by whom, and action taken.

(7) Offsite surveillance activities, including actions taken.

(8) Job safety evaluations stating what was checked, results, and instructions or corrective actions.

(9) Instructions given/received and conflicts in plans and/or specifications.

(10) Contractor's verification statement.

(11) Deficiency Tracking System. Maintain a cumulative list of deficiencies identified for the duration of the project. Deficiencies to be listed include those failures, Government oral observations, and Notifications of Noncompliance. Maintain the list at the project site. Submit copies of updated listings to the Government at least every 30 days.

b. 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. Electronically submit daily reports and a signed, printed copy of these records to the Government 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 seven days of no work and on the last day of a no work period. All calendar days must be accounted for throughout the life of the Contract. The first report following a day of no work must be for that day only. Reports must be signed and dated by the CQC System Manager. Include copies of test reports and copies of reports prepared by all subordinate quality control personnel within the Daily CQC Report.

3.11 NOTIFICATION OF NONCOMPLIANCE

The CO 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, must be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the CO may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor must make no part of the time lost due to such stop orders the subject of claim for extension of time or for excess costs or damages.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 45 00.15 25

RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE (RMS CM)

PART 1 GENERAL

1.1 REFERENCES
1.2 CONTRACT ADMINISTRATION
1.2.1 Correspondence and Electronic Communications
1.2.2 Other Factors
1.3 RMS SOFTWARE
1.4 CONTRACT DATABASE - GOVERNMENT
1.5 CONTRACT DATABASE - CONTRACTOR
1.5.1 Administration
1.5.1.1 Contractor Information
1.5.1.2 Subcontractor Information
1.5.1.3 Correspondence
1.5.1.4 Equipment
1.5.1.5 Reports
1.5.1.6 Request For Information (RFI)
1.5.2 Finances
1.5.2.1 Pay Activity Data
1.5.2.2 Payment Requests
1.5.3 Quality Control (QC)
1.5.3.1 Quality Control (QC) Reports
1.5.3.2 Deficiency Tracking
1.5.3.3 Three-Phase Control Meetings
1.5.3.4 Labor and Equipment Hours
1.5.3.5 Accident/Safety Reporting
1.5.3.6 Definable Features of Work
1.5.3.7 Activity Hazard Analysis
1.5.4 Submittal Management
1.5.5 Schedule
1.5.6 Closeout
1.6 IMPLEMENTATION
1.7 NOTIFICATION OF NONCOMPLIANCE

PART 2 PRODUCTS

PART 3 EXECUTION

-- End of Section Table of Contents --

SECTION 01 45 00.15 25

RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE (RMS CM)

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	(2024) Safety -- Safety and Occupational Health (SOH) Requirements

1.2 CONTRACT ADMINISTRATION

a. 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:

(1) Administration

(2) Finances

(3) Quality Control

(4) Submittal Monitoring

(5) Scheduling

(6) Closeout

(7) Import/Export of Data

b. Be prepared to transition from the Resident Management System (RMS) to the new Construction Management Platform (CMP) at any time during the period of performance of this Contract, once the USACE enterprise implements this change. The Contractor's obligation to transition from RMS to the CMP system is a requirement of this Contract. Therefore, additional time or cost increase to complete this transition will not be considered. In the event of the transition, RMS project information will be migrated to CMP by the Government and available in the CMP system. After the transition, utilize the CMP system to perform all Contract administration functions previously required in RMS, including all areas listed above. After the transition, “RMS” and “CMP” will be synonymous for all “Resident

Management System" and "RMS" references in this Contract's specification. To facilitate the transition from RMS to CMP, online training for the CMP system will be made available to the Contractor with enough time to train staff, prior to the transition occurring.

1.2.1 Correspondence and Electronic Communications

For ease and speed of communications, exchange correspondence and other documents in electronic format to the maximum extent feasible.

1.2.2 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 25 PROJECT SCHEDULE; Section 01 33 00 SUBMITTAL PROCEDURES; Section 01 35 26.00 25 GOVERNMENTAL SAFETY REQUIREMENTS; and Section 01 45 00.00 25 QUALITY CONTROL.

1.3 RMS SOFTWARE

RMS is a web based application. Download, install and be able to utilize the latest version of RMS within seven 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.

1.4 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.

1.5 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:

1.5.1 Administration

1.5.1.1 Contractor Information

Enter all current Contractor administrative data and information into RMS within seven 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.

1.5.1.2 Subcontractor Information

Enter all missing subcontractor administrative data and information into RMS CM within seven calendar days of receiving access to the Contract in RMS or within seven 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.

1.5.1.3 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".

1.5.1.4 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 in accordance with Section 01 45 00.00 25 QUALITY CONTROL.

1.5.1.5 Reports

Track the status of the project using the reports available in RMS. The value of these reports reflects the quality of the data input. These reports include but are not limited to the Progress Payment Request worksheet, Quality Control (QC) comments, Deficiency Tracking Log, Submittal Register Status, and Three-Phase Control worksheets in accordance with Sections 01 22 00.00 25 MEASUREMENT AND PAYMENT, Section 01 32 01.00 25 PROJECT SCHEDULE, 01 33 00 SUBMITTAL PROCEDURES, and 01 45 00.00 25 QUALITY CONTROL.

1.5.1.6 Request For Information (RFI)

Create and track all Requests For Information (RFI) in the RMS Administration Module for Government review and response. Provide status at weekly progress meeting in accordance with Section 01 32 01.00 25 PROJECT SCHEDULE.

1.5.2 Finances

1.5.2.1 Pay Activity Data

Develop and enter a list of pay activities in conjunction with the project schedule in accordance with Section 01 32 01.00 25 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.

1.5.2.2 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.

1.5.3 Quality Control (QC)

Enter and track implementation of the 3-phase QC Control System, QC testing, transferred and installed property and warranties in RMS. Link each deficiency and QC test to a pay activity. 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. Ensure that RMS reflects all quality control methods, tests and actions contained within the Contractor Quality Control (CQC) Plan and Government review comments. Provide within seven calendar days of Government acceptance of the CQC Plan.

1.5.3.1 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.

1.5.3.2 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.

1.5.3.3 Three-Phase Control Meetings

Maintain scheduled and actual dates and times of preparatory and initial control meetings in RMS, and upload meeting minutes of the meetings. Worksheets for the three-phase control meetings are generated within RMS.

1.5.3.4 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.

1.5.3.5 Accident/Safety Reporting

Both the Contractor and the Government enter safety related comments in RMS as a deficiency. 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 26.00 25 GOVERNMENTAL SAFETY REQUIREMENTS and as required by any other applicable Federal, State or local agencies.

1.5.3.6 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.

1.5.3.7 Activity Hazard Analysis

Import activity hazard analysis electronic document files into the RMS QC Module utilizing the document package manager. Prepare activity hazard analysis in accordance with Section 01 35 26.00 25 GOVERNMENT SAFETY REQUIREMENTS.

1.5.4 Submittal Management

a. Enter all current submittal register data and information into RMS within seven calendar days of receiving access to the Contract in RMS.Entering Activity Numbers for each submittal item corresponding to their Schedule. 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.

b. Enter all submittals as listed in the approved design's submittal register within 14 calendar days of design approval for construction.

c. Contractor may request submittals to be added to RMS throughout the lifecycle of the project. Approval/disapproval of Contractor requests is at the discretion of the Contracting Officer (CO). Submittals entry into RMS must be updated daily or as practical for performance of the Contract, as approved by the CO.

1.5.5 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 25 PROJECT SCHEDULE.

1.5.6 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.

1.6 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.

1.7 NOTIFICATION OF NONCOMPLIANCE

Take corrective action within seven calendar days after receipt of notice of RMS non-compliance by the CO.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 57 19.00 25

TEMPORARY ENVIRONMENTAL CONTROLS

PART 1 GENERAL

1.1 GENERAL INFORMATION
1.2 REFERENCES
1.3 DEFINITIONS
1.3.1 Contractor-Generated Hazardous Waste
1.3.2 Electronics Waste
1.3.3 Environmental Pollution and Damage
1.3.4 Environmental Protection
1.3.5 Hazardous Debris
1.3.6 Hazardous Materials
1.3.7 Hazardous Waste
1.3.8 Land Application
1.3.9 National Pollutant Discharge Elimination System (NPDES)
1.3.10 Oily Waste
1.3.11 Petroleum, Oils, and Lubricants (POLs)
1.3.12 Regulated Waste
1.3.13 Sediment
1.3.14 Solid Waste
1.3.14.1 Construction Debris
1.3.14.2 Non-Hazardous Waste
1.3.14.3 Recyclables
1.3.14.4 Surplus Soil
1.3.14.5 Scrap Metal
1.3.15 Surface Discharge
1.3.16 Stormwater
1.3.17 Wastewater
1.3.18 Waters of the United States
1.3.19 Wetlands
1.3.20 Universal Waste
1.4 SUBMITTALS
1.5 GENERAL ENVIRONMENTAL PROTECTION REQUIREMENTS
1.6 ENVIRONMENTAL PERMITS AND COMMITMENTS
1.7 QUALITY CONTROL
1.7.1 Environmental Coordination Meeting
1.7.2 Non-Compliance Notifications
1.8 ENVIRONMENTAL PROTECTION PLAN
1.8.1 General Overview and Purpose
1.8.1.1 Procedures
1.8.1.2 Communications
1.8.2 Environmental Manager Qualifications
1.8.3 Regulatory Notification and Permits
1.8.4 General Site Information
1.8.4.1 Drawings
1.8.4.2 Work Area
1.8.5 Documentation of Environmental Conditions

1.8.6 Protection of the Environment from Waste Derived from Contractor Operations
1.8.7 Spill Prevention and Control Plan
1.8.8 Clean Air Act Compliance
1.8.8.1 Dirt and Dust Control Plan
1.8.8.2 Pollution Generating Equipment
1.8.8.3 Refrigerants
1.8.8.4 Air Pollution-Generating Processes
1.8.8.5 Compliant Materials
1.8.8.6 Safety Data Sheets (SDS)
1.9 ENVIRONMENTAL RECORDS BINDER
1.9.1 Employee Training Records

PART 2 PRODUCTS

PART 3 EXECUTION

3.1 PROTECTION OF NATURAL RESOURCES
3.1.1 Streams
3.1.2 Wetlands and Other Sensitive Areas
3.2 SURFACE AND GROUNDWATER
3.2.1 Waters of the United States
3.3 CULTURAL RESOURCES
3.3.1 Archaeological Resources
3.4 AIR RESOURCES
3.4.1 Burning
3.4.2 Dust and Particulate Control
3.4.3 Odors
3.5 WASTE MINIMIZATION
3.5.1 Salvage, Reuse and Recycle
3.6 WASTE MANAGEMENT AND DISPOSAL
3.6.1 Waste Determination Documentation
3.6.2 Solid Waste Management
3.6.2.1 Solid Waste Management Report
3.6.2.2 Control and Management of Solid Wastes
3.6.3 Control and Management of Hazardous Waste
3.6.3.1 Hazardous Waste/Debris Management
3.6.3.2 Hazardous Waste Disposal
3.6.3.3 Universal Waste Management
3.6.3.4 Electronics End-of-Life Management
3.6.4 Releases/Spills of Oil and Hazardous Substances
3.6.5 Mercury Materials
3.6.6 Wastewater
3.6.6.1 Treatment
3.6.6.2 Sanitary Sewer Discharge
3.6.6.3 Surface Discharge
3.6.6.4 Land Application
3.7 HAZARDOUS MATERIAL MANAGEMENT
3.8 PREVIOUSLY USED EQUIPMENT
3.9 PETROLEUM, OILS, AND LUBRICANTS (POLs) STORAGE AND FUELING
3.9.1 Used Oil Management
3.9.2 Oil Storage Including Fuel Tanks
3.10 INADVERTENT DISCOVERY OF PETROLEUM-CONTAMINATED SOIL OR HAZARDOUS WASTES
3.11 NOISE CONTROL
3.11.1 General
3.11.2 Noise Limitations
3.12 POST CONSTRUCTION CLEANUP

-- End of Section Table of Contents --

SECTION 01 57 19.00 25

TEMPORARY ENVIRONMENTAL CONTROLS

PART 1 GENERAL

1.1 GENERAL INFORMATION

This section includes requirements for preventing and controlling environmental pollution and minimizing environmental impacts to the site and surroundings during the work. The control of environmental pollution requires consideration of sound levels, air, water, and land resources; the proper management and use of petroleum products and hazardous materials; and the disposal of solid and hazardous wastes. Those specific requirements are in addition to or modify the requirements in this section. The project site lies within the State of Oregon. Conform to all applicable state regulations.

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.

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2024) Safety -- Safety and Occupational Health (SOH) Requirements

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA 800-R-11-002	(2011) Environmentally Acceptable Lubricants

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910.120	Hazardous Waste Operations and Emergency Response
29 CFR 1926.52	Occupational Noise Exposure
29 CFR 1926.101	Hearing Protection
40 CFR 50	National Primary and Secondary Ambient Air Quality Standards
40 CFR 61	National Emission Standards for Hazardous Air Pollutants
40 CFR 112	Oil Pollution Prevention
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 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 302	Designation, Reportable Quantities, and Notification
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 173	Shippers - General Requirements for Shipments and Packagings

1.3 DEFINITIONS

1.3.1 Contractor-Generated Hazardous Waste

Contractor-generated hazardous waste is material that, if abandoned or disposed of, may meet the definition of a hazardous waste. These waste streams 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. The cleanup of Contractor spills of hazardous materials or petroleum products may also result in the generation of Contractor-generated hazardous waste.

1.3.2 Electronics Waste

Electronics waste is discarded electronic devices intended for salvage, recycling, or disposal.

1.3.3 Environmental Pollution and Damage

Environmental pollution and damage is the presence of chemical, physical, or biological elements or agents that 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.

1.3.4 Environmental Protection

Environmental protection is the prevention/control of pollution and habitat disruption that may occur 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.

1.3.5 Hazardous Debris

Hazardous debris is 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.

1.3.6 Hazardous Materials

a. Hazardous materials as defined in 49 CFR 171 and listed in 49 CFR 172.

b. 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).

1.3.7 Hazardous Waste

Hazardous Waste is any material that meets the definition of a solid waste and exhibits a hazardous characteristic (ignitability, corrosivity, reactivity, or toxicity) as specified in 40 CFR 261, Subpart C, is listed in40 CFR 261, Subpart D, or is a mixture of a solid waste and one or more hazardous wastes listed in 40 CFR 261, Subpart D.

1.3.8 Land Application

Land Application means spreading or spraying discharge water at a rate that allows the water to percolate into the soil.

1.3.9 National Pollutant Discharge Elimination System (NPDES)

The NPDES permit program controls water pollution by regulating point sources, including stormwater discharges from construction sites, that discharge pollutants into waters of the United States. In the state of Oregon, the Department of Environmental Quality (ODEQ) has the delegated authority to administer the NPDES permit program and issue permits, including the construction stormwater general permit.

1.3.10 Oily Waste

a. Oily wastes are materials that are, or were, mixed with Petroleum, Oils, and Lubricants (POLs) and have become separated from the POLs. Oily wastes also refers to 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.

b. 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 minimis" (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.

1.3.11 Petroleum, Oils, and Lubricants (POLs)

POL products include flammable or combustible liquids, such as gasoline, diesel, lubricating oil, used engine oil, hydraulic oil, mineral oil, and cooking oil.

1.3.12 Regulated Waste

Regulated wastes are solid wastes that have specific additional federal, state, or local requirements for handling, storage, or disposal.

1.3.13 Sediment

Sediment is soil or other debris that has eroded and has been transported by runoff water or wind.

1.3.14 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:

1.3.14.1 Construction Debris

Construction debris is non-hazardous solid material generated during the construction, demolition, or renovation of a structure that exceeds 2.5-inchparticle size that is: a manufactured object; plant or animal matter; or natural geologic material (e.g., cobbles and boulders), broken or removed concrete, masonry, rebar, and rock asphalt paving; ceramics; roofing paper and shingles. A mixture of debris and other material is also subject to regulation as debris if the mixture is comprised primarily of debris by volume, based on visual inspection.

1.3.14.2 Non-Hazardous Waste

Non-hazardous waste is waste that is excluded from, or does not meet, hazardous waste criteria in accordance with 40 CFR 262.

1.3.14.3 Recyclables

Recyclables are materials, equipment, and assemblies such as metal parts, wiring, insulated/non-insulated copper wire cable, wire rope, and structural components that are recovered and sold as recyclable. It also includes clean polyethylene terephthalate bottles, cooking oil, used fuel oil, high-grade paper products and corrugated cardboard, stackable pallets in good condition, clean crating material, and clean rubber/vehicle tires. Metal containing lead or lead-based paint may be included as recyclable if sold to a scrap metal company with full disclosure of the presence of lead or other metal contaminants. 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.

1.3.14.4 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 WASTE/DEBRIS MANAGEMENT.

1.3.14.5 Scrap Metal

This includes scrap and excess ferrous and non-ferrous metals such as reinforcing steel, structural shapes, pipe, and wire that are recovered or collected and managed as scrap. Scrap metal meeting the definition of hazardous material or hazardous waste is not included.

1.3.15 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.

1.3.16 Stormwater

Stormwater is any portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, or other features of a stormwater drainage system into a defined surface waterbody, or a constructed stormwater management facility.

1.3.17 Wastewater

Wastewater is any water used or generated during construction, including groundwater, that contains contaminants, pollutants, or hazardous substances and that must be managed to prevent discharge to waters of the United States or waters of the State.

1.3.18 Waters of the United States

Waters of the United States means federal 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.

1.3.19 Wetlands

Wetlands are 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.

1.3.20 Universal Waste

The universal waste regulations streamline collection requirements for certain hazardous wastes in the following categories: batteries, pesticides, mercury-containing equipment (e.g., thermostats), lamps (e.g., fluorescent bulbs) and aerosol cans. 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.

1.4 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

Environmental Protection Plan; G

SD-11 Closeout Submittals

Environmental Records Binder; G

1.5 GENERAL ENVIRONMENTAL PROTECTION REQUIREMENTS

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 must be performed by qualified laboratories, and where required by law, the laboratories must be certified.

1.6 ENVIRONMENTAL PERMITS AND COMMITMENTS

Obtain all permits and licenses required for this project as stated in this Section and in accordance with FAR 52.236-7 Permits and Responsibilities. Provide an electronic copy of each permit or license obtained by the Contractor to the Government. Comply with all environmental permits and commitments required by federal, state, regional, and local environmental laws and regulations.

1.7 QUALITY CONTROL

1.7.1 Environmental Coordination Meeting

a. Prior to initiating any work on site, meet with the CO to discuss the proposed Environmental Protection Plan (EPP). Submit the EPP 14 calendar days before the Environmental Coordination meeting. Develop a mutual understanding relative to the details of environmental protection, including measures for protecting natural and cultural resources, required reports, required permits, permit requirements (such as mitigation measures), and other measures to be taken.

b. Provide the following information for the meeting agenda: types, quantities, and use of hazardous materials that will be brought onto the project site; and types and quantities of wastes/wastewater that may be generated during the Contract.

1.7.2 Non-Compliance Notifications

The CO 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 CO of the proposed corrective action and take such action when approved by the CO. The CO may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions will be granted nor equitable adjustments allowed for any such suspensions. This is in addition to any other actions the CO may take under the Contract, or in accordance with the Federal Acquisition Regulation or federal law.

1.8 ENVIRONMENTAL PROTECTION PLAN

a. The purpose of the EPP is to present an overview of known or potential environmental issues that must be considered and addressed during construction. 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 may have an environmental impact. No requirement in this section will relieve the Contractor of any applicable federal, state, and local environmental protection laws or regulations. During Construction, identify, implement, and submit for approval any additional Environmental Protection Plan requirements to be included in the EPP. Maintain the current version onsite.

b. The EPP must include the following elements:

1.8.1 General Overview and Purpose

A brief description of each specific plan required by applicable environmental permit or elsewhere in this Contract such as the Erosion and Sediment Control Plan, Stormwater Pollution Prevention Plan, Spill Prevention and Control Plan, and Solid Waste Management Plan.

1.8.1.1 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.

1.8.1.2 Communications

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

1.8.2 Environmental Manager Qualifications

Include in the EPP 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 and emergency contact information (office phone number, cell phone number, and e-mail address). The Environmental Manager is directly responsible for coordinating contractor compliance with federal, state, and local requirements. The Environmental Manager may have other duties on the jobsite; however, the person in this position must be trained to adequately accomplish the following duties:

a. Ensure compliance with Hazardous Waste Program requirements (including hazardous waste handling, storage, manifesting, and disposal).

b. Implement the EPP and ensure its compliance.

c. Ensure environmental permits are obtained, maintained, and closed out.

d. Ensure compliance with Stormwater Program requirements.

e. Ensure compliance with Hazardous Materials (storage, handling, and reporting) requirements; and coordinate any remediation of regulated substances (lead, asbestos, PCBs).

f. Be responsible for spill prevention and cleanup and training personnel on spill response procedures.

g. Be responsible for manifesting hazardous waste to be removed from the site (if applicable).

h. Be responsible for training the Contractor's environmental protection personnel.

j. Ensure waste segregation and storage compatibility requirements are met.

k. Ensure only authorized personnel add wastes to containers.

l. Ensure Contractor personnel are trained in 40 CFR requirements in accordance with their position requirements.

m. Coordinate removal of waste containers.

n. Maintain the Environmental Records Binder and required documentation, including environmental permits compliance and close-out.

1.8.3 Regulatory Notification and Permits

List all notifications and permit applications that must be made by the Contractor as required by this section, if any. 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.

1.8.4 General Site Information

1.8.4.1 Drawings

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

1.8.4.2 Work Area

Include in the EPP a 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.

1.8.5 Documentation of Environmental Conditions

Describe existing conditions and identify procedures to be implemented to ensure protection of existing environmental conditions for the following categories as applicable:

a. Protection of Natural Resources

b. Stormwater

c. Surface and Groundwater

d. Cultural Resources

e. Air Resources

f. Waste Minimization

g. Waste Management and Disposal

h. Hazardous Material Management

i. Petroleum, Oils, and Lubricants (POLs) Storage and Fueling

1.8.6 Protection of the Environment from Waste Derived from Contractor Operations

If hazardous wastes are anticipated to be generated by the Contractor, identify and describe the procedures to be implemented for the management and disposal of hazardous waste and debris. 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, drums, or other 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

i. Hazardous waste minimization procedures

j. Plans for the disposal of hazardous waste at permitted facilities

1.8.7 Spill Prevention and Control Plan

Include in the Spill Prevention and Control Plan the procedures, instructions, and reports to be used in the event of an unforeseen spill of a substance regulated by 40 CFR 112, 40 CFR 302, and/or regulated under state or local laws and regulations. The Spill Prevention and Control Plan supplements the requirements of EM 385-1-1. This plan must include as a minimum:

a. Measures to be implemented to prevent spills of petroleum products and hazardous substances to the environment.

b. Name of the individual who reports any spills or hazardous substance releases and follows up with complete documentation. This individual must immediately notify the CO and Facility Response Personnel in addition to the legally required federal, state, and local reporting channels (including the National Response Center (NRC) 1-800-424-8802) if a reportable quantity is released to the environment.

(1) The plan must contain a list of the required reporting channels and telephone numbers.

(2) The 24-hour spill notification telephone numbers including NRC, County, and local police and/or Emergency Response organization as appropriate and required. The plan must include 24-hour emergency number for the Government Quality Assurance Representative (GQAR), Project Engineer, and Resident Engineer.

c. Name(s) and qualifications of the individual(s) responsible for

implementing and supervising the containment and cleanup.

d. Training requirements for Contractor's personnel and methods of accomplishing the training.

e. List of materials and equipment to be immediately available at the job site, tailored to cleanup work of the potential hazard(s) identified. For all work in or adjacent to water, a 200-foot-long minimum containment boom, skimming equipment, and a cleanup kit must be available at the job-site. To determine the number of required floating plants, consider the logistics, time required to begin containment and cleanup of a spill, accessibility, number of remote work areas, and number and location of floating plants on the river. Materials and equipment for other cleanup work must be tailored to the potential hazards involved.

f. Names and locations of suppliers of containment materials and locations of additional fuel oil recovery, cleanup restoration, and material-placement equipment available in case of an unforeseen spill emergency.

g. Methods and procedures to be used for expeditious contaminant cleanup.

h. Include a hazardous material Spill Emergency Initial Report Form, similar to Attachment A3. Ensure that all of the elements shown on the sample form are provided and submitted within 24 hours of a spill.

1.8.8 Clean Air Act Compliance

1.8.8.1 Dirt and Dust Control Plan

Include a Dirt and Dust Control Plan in the EPP showing proposed activities and identify measures to minimize dust. Include truck and material haul routes along with measures for controlling dirt, debris, and dust. As a minimum, identify in the plan any equipment for cleaning along the haul route and measures to reduce dirt, dust, and debris from roadways.

1.8.8.2 Pollution Generating Equipment

Identify air pollution generating equipment or processes that may require federal, state, or local permits under the Clean Air Act.

1.8.8.3 Refrigerants

Identify management practices to ensure that heating, ventilation, and air conditioning (HVAC) work involving refrigerants complies with state and federal requirements. Technicians must be certified, maintain copies of certification on site, use certified equipment and log work that requires the addition or removal of refrigerant. Any refrigerant reclaimed is the property of the Government. Coordinate with the USACE Environmental Compliance Coordinator to determine the appropriate turn in location.

1.8.8.4 Air Pollution-Generating 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).

1.8.8.5 Compliant Materials

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 of 40 CFR 61.

1.8.8.6 Safety Data Sheets (SDS)

Include in the EPP an SDS and estimated quantity to be used for each hazardous material brought onto the site. State how the hazardous material will be used and why it is required for the performance of this Contract.

1.9 ENVIRONMENTAL RECORDS BINDER

a. Create and maintain a three-ring binder of documents that demonstrate compliance with the environmental permits in this Contract. The binder must include, but is not limited to, the following items:

(1) Employee Training records

(2) Relevant environmental permits

(3) Waste Determination Documentation

(4) Solid Waste Management Report

(5) Hazardous Waste/Debris Management Report

b. Maintain the binder on-site and submit an electronic copy of the binder to the CO at the completion of the project. The binder must be available for review at all times.

1.9.1 Employee Training Records

a. Prepare and maintain Employee Training Records throughout the term of the Contract meeting applicable 40 CFR requirements. Keep Employee Training Records in the Environmental Records Binder. Ensure every employee completes a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures compliance with federal, state and local regulatory requirements.

b. Train personnel to meet regulatory requirements for environmental, biological and cultural resources and provide an attendance roster documenting the names of personnel trained and the dates training occurred. Conduct environmental protection/pollution control meetings for personnel prior to commencing construction activities. Conduct additional meetings for new personnel and when site conditions change. Include in the training and meeting agenda the following:

(1) the methods of detecting and avoiding pollution;

(2) familiarization with statutory and contractual pollution standards;

(3) installation and care of devices, vegetative covers, and

instruments required for monitoring purposes to ensure adequate and continuous environmental protection/pollution control;

(4) anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 PROTECTION OF NATURAL RESOURCES

a. Protect the natural resources at and near the project site. Prevent disturbance 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.

b. Prior to commencing construction activities, mark (or fence) the limits of disturbance noted on the plans. If no limit is indicated, mark the limits of the work indicated and specified. Mark isolated areas within the limits of disturbance that are not to be disturbed. Markers must be highly visible. Personnel must be knowledgeable of the purpose for marking and protecting particular objects. Confine all construction activities within the marked limits of disturbance.

3.1.1 Streams

a. 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.

b. Stream crossings must allow movement of materials or equipment without violating water pollution control standards of the federal, state, and local governments.

c. The CO'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 CO'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 CO.

3.1.2 Wetlands and Other Sensitive Areas

Provide BMPs to protect wetlands and other sensitive areas. Locate BMPs to provide a minimum 50-feet buffer between the sensitive area and construction activity, unless noted otherwise on the plans.

3.2 SURFACE AND GROUNDWATER

3.2.1 Waters of the United States

Do not enter, disturb, destroy, or allow discharge of contaminants into waters of the United States unless otherwise noted on specifications.

3.3 CULTURAL RESOURCES

3.3.1 Archaeological Resources

If, during excavation or other construction activities, any previously unidentified or unanticipated historical, archaeological, or cultural resources are discovered or found, activities that may damage or alter such resources will be suspended. Resources covered by this paragraph include, but are not limited to: any human skeletal remains or burials; artifacts; shell, midden, bone, charcoal, or other deposits; rock or coral alignments, pavings, wall, or other constructed features; and any indication of agricultural or other human activities. Upon such discovery or find, immediately notify the CO so that the appropriate authorities may be notified and a determination made as to their significance and what, if any, special disposition of the finds should be made. Cease all activities that may result in impact to or the destruction of these resources. Secure the area and prevent employees or other persons from trespassing on, removing, or otherwise disturbing such resources. The Government retains ownership and control over archaeological resources.

3.4 AIR RESOURCES

Equipment operation, activities, or processes must be in accordance with applicable federal and state air emission and performance laws and standards. To reduce air emissions, equipment must not remain idle for longer than 15 minutes.

3.4.1 Burning

Burning is prohibited on the Government premises.

3.4.2 Dust and Particulate Control

Control dust at all times, including during non-working periods. 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. Sprinkling or other methods will be permitted to control particulates in the work area. Sprinkling, to be effective, must be repeated to keep the disturbed area damp. Perform particulate control as the work proceeds and whenever a particulate hazard occurs. Comply with state and local visibility regulations.

3.4.3 Odors

Control odors from construction activities. The odors must be in compliance with state regulations and local ordinances and may not constitute a health hazard.

3.5 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. Describe the

anticipated types of the hazardous materials to be used during construction.

3.5.1 Salvage, Reuse and Recycle

a. 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.

b. 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.

3.6 WASTE MANAGEMENT AND DISPOSAL

3.6.1 Waste Determination Documentation

Complete a Waste Determination form for all anticipated Contractor-derived solid and hazardous wastes to be generated. All potentially hazardous waste streams that are not subject to a specific exclusion or exemption from the hazardous waste regulations (e.g. scrap metal) 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 the waste determination on user knowledge of the processes and materials used, and analytical data when necessary. Attach support documentation to the Waste Determination form. At a minimum, provide a Waste Determination form for the following wastes (this listing is not inclusive): oil- and latex-based painting and caulking products, solvents, adhesives, aerosols, petroleum products, and containers of the original materials. Include Waste Determination Documentation in the Environmental Records Binder.

3.6.2 Solid Waste Management

3.6.2.1 Solid Waste Management Report

Prepare a Solid Waste Management Report following completion of construction and include the report in the Environmental Records Binder. For each waste, the report must state the classification (using the definitions provided), amount in cubic yards, pounds or tons, location, and name of the business receiving the solid waste. Provide copies of the waste handling facilities' weight tickets, receipts, and 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 management report. Prices paid or received do not have to be reported to the CO unless required by other provisions or specifications of this Contract or public law.

3.6.2.2 Control and Management of Solid Wastes

a. Prevent contamination of the site or other areas when handling and

disposing of wastes. Employ segregation measures so that no hazardous or toxic waste will become co-mingled with non-hazardous solid waste. Transport solid waste off Government property and dispose of it in compliance with 40 CFR 260, state, and local requirements for solid waste disposal. A Subtitle D RCRA permitted landfill is the minimum acceptable offsite solid waste disposal option. Verify that the selected transporters and disposal facilities have the necessary permits and licenses to operate. Solid waste disposal offsite must comply with most stringent local, state, and federal requirements.

b. 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.

3.6.3 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 CO. Provide the documentation required in this subsection in the Hazardous Waste/Debris Management Report of the Environmental Records Binder.

3.6.3.1 Hazardous Waste/Debris Management

a. Prepare a Hazardous Waste/Debris Management Report that identifies the hazardous waste or debris, and the quantities of each, that were generated by construction activities. Include 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, and 40 CFR 268. Include the Hazardous Waste/Debris Management Report in the Environmental Records Binder.

b. Manage hazardous waste in accordance with the approved EPP. Store hazardous wastes in approved containers in accordance with 49 CFR 173. Hazardous waste generated within the confines of Government facilities is identified as being generated by the Government. Do not bring hazardous waste onto Government property.

3.6.3.2 Hazardous Waste Disposal

The following applies to disposal of any hazardous waste:

a. Use, or propose for use, materials which may be considered environmentally friendly in that waste from such materials is not regulated as a hazardous waste or is not considered harmful to the environment.

b. Documentation for analysis, sampling, transportation, and disposal of all hazardous waste generated during this Contract must be in accordance with 40 CFR 260-262.

c. Remove all Contractor-generated hazardous wastes from the project for proper disposal within 90 days of waste generation or at the completion of on-site work. Package, label, and mark all hazardous waste in accordance with 49 CFR 172 and 40 CFR 262. Store all hazardous waste in accordance with 40 CFR 262.

d. Transportation of Contractor hazardous material must be in accordance with 49 CFR 171, 49 CFR 172, and 49 CFR 173.

e. Use the Contractor's Environmental Protection Agency (EPA) identification number to dispose of all hazardous waste generated by the Contractor and its subcontractors under this Contract. This is construed to mean all hazardous waste the Contractor or subcontractors generate from materials brought on the site for the purpose of performing work under the terms of the Contract.

f. The Government will dispose of all hazardous waste generated from Government-owned facilities on the project. This is construed to mean hazardous wastes generated from the repair, demolition, or removal of any existing materials and buildings from the Government facilities and is not intended to include any wastes generated by the Contractor in the performance of its work.

g. The GQAR will notify the project Environmental Compliance Coordinator (ECC) when Government owned wastes are generated. The project ECC will ensure that the wastes are labeled correctly. The GQAR will notify the project ECC when waste containers are full. The project ECC will then arrange for movement of the waste to a designated Government waste collection area.

h. It is the responsibility of the Contractor to prepare hazardous waste manifests for Contractor-generated hazardous waste. The Government will review the Contractor's hazardous waste manifest to ensure the use of the Contractor's own EPA identification number. Include copies of the Hazardous Waste Manifests for all Contractor-generated hazardous wastes disposed off-site in the Environmental Records Binder.

i. Recycle Contractor-generated hazardous or dangerous waste to the maximum extent possible. Placing hazardous or dangerous waste in a permitted hazardous waste landfill must be the last resort.

j. Follow state and local hazardous waste requirements.

3.6.3.3 Universal Waste Management

a. Manage universal waste in accordance with 40 CFR 273 and federal, state, and local requirements.

b. Mercury is prohibited in the construction of this facility, unless specified otherwise, and with the exception of mercury vapor lamps and fluorescent lamps. Dumping of mercury-containing materials and devices such as mercury vapor lamps, fluorescent lamps, or mercury switches in rubbish containers is prohibited. Remove without breaking, pack to prevent breakage, and transport out of the activity in an unbroken condition for disposal as directed.

3.6.3.4 Electronics End-of-Life Management

Recycle or dispose of electronics waste, including, but not limited to, used electronic devices such computers, monitors, hard-copy devices, televisions, mobile devices, in accordance with 40 CFR 260-262, state, and local requirements.

3.6.4 Releases/Spills of Oil and Hazardous Substances

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.

3.6.5 Mercury Materials

a. Immediately report to the Environmental Compliance Coordinator and the CO instances of breakage or mercury spillage. Clean mercury spill area to the satisfaction of the CO.

b. Do not recycle a mercury spill cleanup; manage it as a hazardous waste for disposal.

3.6.6 Wastewater

3.6.6.1 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 waterways or to be discharged prior to being treated to remove pollutants. Dispose of the construction-related waste water by collecting and placing it in a drum or tank where suspended material can be settled out or the water can evaporate to separate pollutants from the water. The site for the drum or tank must be coordinated and approved with the CO. The residue left in the drum or tank, prior to completion of the project must be removed, tested, and disposed of off Government property in accordance with federal, state, and local laws and regulations.

3.6.6.2 Sanitary Sewer Discharge

Discharges to sanitary sewers are not allowed unless the Contractor has obtained all applicable permits for those discharges.

3.6.6.3 Surface Discharge

Surface discharge of wastewater to land or waterways is not permitted unless the Contractor has obtained all applicable NPDES permits for that discharge.

3.6.6.4 Land Application

Do not allow sheeting action, soil erosion, discharge into storm sewers, discharge into defined drainage areas, or discharge into the "waters of the United States". Comply with federal, state, and local laws and regulations.

3.7 HAZARDOUS MATERIAL MANAGEMENT

Include hazardous material control procedures in the Safety Plan, in accordance with Section 01 35 26.00 25 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. 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 do not meet the definition of hazardous waste, in accordance with 40 CFR 261.

3.8 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.

3.9 PETROLEUM, OILS, AND LUBRICANTS (POLs) STORAGE AND FUELING

Utilize environmentally acceptable lubricants including hydraulic fluid as in accordance with EPA 800-R-11-002 when operating equipment below Ordinary High Water and work over water. Store POL products in a manner that affords the maximum protection against spills into the environment. Fuel equipment and motor vehicles in a manner that affords the maximum protection against spills into the environment. 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.

a. Inspect all equipment, vehicles, and power tools for fluid leaks before they arrive onto the project site.

b. Before operation within 150 feet of any body of water, and as often as necessary during operation, thoroughly clean all equipment, vehicles, and power tools to keep them free of external fluids and grease and to prevent leaks and spills from entering the water.

c. Maintain and protect generators, cranes, or other stationary heavy equipment operated within 150 feet of any waterbody as necessary to prevent leaks and spills from entering the water.

3.9.1 Used Oil Management

Manage used oil generated on site in accordance with 40 CFR 279. Determine if any used oil generated while onsite exhibits a characteristic of hazardous waste. Used oil containing 1,000 parts per million of solvents is considered a hazardous waste and disposed of at the Contractor's expense. Used oil mixed with a hazardous waste is also considered a hazardous waste. Dispose in accordance with Paragraph HAZARDOUS WASTE DISPOSAL.

3.9.2 Oil Storage Including Fuel Tanks

a. Provide secondary containment and overfill protection for POL

storage tanks and refueling onsite. Use drip pans during oil transfer operations. Cover tanks and drip pans during inclement weather. Provide procedures and equipment to prevent overfilling of tanks.

b. Monitor and remove any rainwater that accumulates in open containment pans, dikes, or berms. Inspect the accumulated rainwater prior to draining from a containment dike to the environment, to determine there is no oil sheen present. If oil sheen is present, treat and dispose of accumulated rainwater in an environmentally-protective manner approved by the CO.

3.10 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 CO. Do not disturb this material until authorized by the CO.

3.11 NOISE CONTROL

3.11.1 General

Keep construction activities under surveillance and control to minimize environmental damage by noise. Noise control and noise levels must conform to requirements set forth in the appropriate regulations, including EM 385-1-1 Section 05.C, 29 CFR 1926.52, and 29 CFR 1926.101. The most conservative requirement will govern.

3.11.2 Noise Limitations

Follow local noise requirements. In the absence of local requirements, the noise levels, as measured from the nearest dwelling, must not exceed 50 decibels during the hours from 2200 hours to 0700 hours.

3.12 POST CONSTRUCTION CLEANUP

Clean up areas used for construction. Unless otherwise instructed in writing by the CO, 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 --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 74 19.00 25

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 GENERAL

1.1 DEFINITIONS
1.1.1 Co-mingle
1.1.2 Construction Waste
1.1.3 Demolition Debris/Waste
1.1.4 Disposal
1.1.5 Diversion
1.1.6 Final Construction Waste Diversion Report
1.1.7 Recycling
1.1.8 Reuse
1.1.9 Salvage
1.1.10 Source Separation
1.2 CONSTRUCTION WASTE (INCLUDES DEMOLITION DEBRIS/WASTE)
1.3 CONSTRUCTION WASTE MANAGEMENT
1.3.1 Implementation of Construction Waste Management Program
1.3.2 Oversight
1.3.3 Special Instructions
1.3.4 Waste Streams
1.4 SUBMITTALS
1.5 MEETINGS
1.6 CONSTRUCTION WASTE MANAGEMENT PLAN (CWMP)
1.7 RECORDS (DOCUMENTATION)
1.7.1 General
1.7.2 Accumulated
1.8 REPORTS
1.8.1 General
1.8.2 Quarterly Reporting
1.8.3 Annual Reporting
1.9 FINAL CONSTRUCTION WASTE DIVERSION REPORT
1.10 COLLECTION
1.10.1 Source Separation Method
1.10.2 Co-Mingled Method
1.10.3 Other Methods
1.11 DISPOSAL
1.11.1 Reuse
1.11.2 Recycle
1.11.3 Compost
1.11.4 Waste

PART 2 PRODUCTS

PART 3 EXECUTION

-- End of Section Table of Contents --

SECTION 01 74 19.00 25

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

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 or incinerator, 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 or incinerator, 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 or incinerator. Follow applicable industry standards in the management of waste. Apply sound environmental principles in the management of waste.

a. Practice efficient waste management when sizing, cutting, and installing products and materials and

b. 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. 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 (CO) 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 25 QUALITY CONTROL, is responsible for overseeing and documenting results from executing the Construction Waste Management Plan for the project.

1.3.3 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.

1.3.4 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 steams not listed:

a. Land Clearing Debris

b. Asphalt

c. Masonry and CMU

d. Concrete

e. Metals (Includes, but is not limited to, banding, stud trim, ductwork, piping, rebar, roofing, other trim, steel, iron, galvanized, stainless steel, aluminum, copper, zinc, bronze.)

f. Wood (nails and staples allowed)

g. Glass

h. Paper

i. Plastics (PET, HDPE,PVC,LDPE,PP,PS, Other)

j. Gypsum

k. Non-hazardous paint and paint cans

l. Carpet

m. Ceiling Tiles

n. Insulation

o. Beverage Containers

1.4 SUBMITTALS

Government approval is required for submittals with a "G". Submittals not having a "G" classification are for information only. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Construction Waste Management Plan; G

SD-06 Test Reports

Quarterly Reports

Annual Report

SD-11 Closeout Submittals

Final Construction Waste Diversion Report; G

1.5 MEETINGS

a. Conduct Construction Waste Management meetings. After award of the Contract and prior to commencement of work, schedule and conduct a meeting with the CO 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.

b. At a minimum, discuss and document waste management goals at following meetings:

(1) Preconstruction meeting.

(2) Preparatory meetings.

(3) Regular coordination meetings.

(4) Safety Meetings.

1.6 CONSTRUCTION WASTE MANAGEMENT PLAN (CWMP)

a. Submit Construction Waste Management Plan as part of the PSMP. Approval of the CWMP is required prior to the start of on-site work. Manage demolition debris/waste or deconstruction materials in accordance with the approved construction waste management plan.

b. An approved CWMP 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:

(1) Identify the names of individuals responsible for waste management and waste management tracking, along with roles and responsibilities on the project.

(2) Actions that will be taken to reduce solid waste generation, including coordination with subcontractors to ensure awareness and participation.

(3) Description of the regular meetings to be held to address waste management.

(4) 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.

(5) Name of landfill and incinerator to be used.

(6) 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.

(7) 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.

(8) Identification of materials that cannot be recycled or reused with an explanation or justification, to be approved by the CO.

(9) Description of the means by which materials identified in item (g) above will be protected from contamination.

(10) 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).

(11) Copy of training plan for subcontractors and other services to prevent contamination by co-mingling materials identified for diversion and waste materials.

1.7 RECORDS (DOCUMENTATION)

1.7.1 General

Maintain records to document the types and quantities of waste generated and diverted though re-use, recycling and sale to third parties; through disposal to a landfill or incinerator facility. Provide explanations for 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 CO during construction or incidental demolition activities. Provide a copy of the diversion records to the CO upon completion of the construction, incidental demolitions or minor deconstruction activities.

1.8 REPORTS

1.8.1 General

Maintain current construction waste diversion information on site for periodic inspection by the CO. Include in the quarterly reports, annual reports and final reports: the project name, Contract information, information for waste generated, diverted and disposed of for the current reporting period and show cumulative totals for the project. Reports must identify quantifies of waste by type and disposal method. Also include in each report, supporting documentation to include manifests, weigh tickets, receipts, and invoices specifically identifying the project and waste material type and weighted sum.

1.8.2 Quarterly Reporting

Provide cumulative reports at the end of each quarter (December, March, June, and September, corresponding with the federal fiscal year for reporting purposes). Submit quarterly reports not later than 15 calendar days after the preceding quarter has ended. See Attachment A8 for an example report.

1.8.3 Annual Reporting

Provide a cumulative construction waste diversion report annually. Submit annual report not later than 30 calendar days after the preceding fourth quarter has ended.

1.9 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 within 90 calendar days of final Construction physical completion.

1.10 COLLECTION

a. 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.

b. Separate materials by one of the following methods described herein:

1.10.1 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.

1.10.2 Co-Mingled Method

Place waste products and recyclable materials into a single container and then transport to an authorized recycling facility, which meets all applicable requirements to accept and dispose of recyclable materials in accordance with all applicable local, state and federal regulations. The Co-mingled materials must be sorted and processed in accordance with the approved Construction Waste Management Plan.

1.10.3 Other Methods

Other methods proposed by the Contractor may be used when approved by the CO.

1.11 DISPOSAL

Control accumulation of waste materials and trash. Recycle or dispose of collected materials off-site at intervals approved by the CO 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:

1.11.1 Reuse

Give first consideration to reusing construction and demolition materials as a disposition strategy. Recover for reuse materials, products, and components as described in the approved Construction Waste Management Plan. Coordinate with the CO to identify onsite reuse opportunities or material sales or donation available through Government resale or donation programs. Sale of recovered materials is not allowed on Government property or at the Construction site, unless approved by the CO. Consider the use of surplus industrial supply broker services, who match entities with reusable or repurpose industrial materials with entities with need of such materials.

1.11.2 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 CO. Do not crush lamps on site as this creates a hazardous waste stream with additional handling requirements.

1.11.3 Compost

Consider composting off site if a reasonable amount of compostable materials will be available and a utilization of compostable material can be determined and appropriately planned for. Compostable materials include plant materials, sawdust and certain food scraps. Composting as a strategy must be explicitly addressed in the Construction Waste Management Plan submitted for approval to ensure it is feasible.

1.11.4 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 --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 78 23.00 25

OPERATION AND MAINTENANCE DATA

PART 1 GENERAL

1.1 SUBMITTALS
1.2 O&M MANUAL EXECUTION PLAN
1.2.1 General Requirements
1.2.2 Project Schedule
1.3 SUBMISSION OF OPERATION AND MAINTENANCE MANUAL DATA
1.3.1 Binder Requirements
1.3.1.1 General
1.3.1.2 Labeling of Binders
1.3.2 Package Quality
1.3.2.1 Drawings
1.3.2.2 Manufacturer's Data
1.3.3 Electronic O&M Manual
1.3.4 Package Content
1.3.5 Changes to Submittals
1.4 TYPES OF INFORMATION REQUIRED IN O&M DATA PACKAGES
1.4.1 Operating Instructions
1.4.1.1 Safety Precautions
1.4.1.2 Operator Prestart
1.4.1.3 Startup, Shutdown, and Post-Shutdown Procedures
1.4.1.4 Normal Operations
1.4.1.5 Emergency Operations
1.4.1.6 Operator Service Requirements
1.4.1.7 Environmental Conditions
1.4.1.8 Manufacturer's Data and Parts Catalogs
1.4.2 Preventive Maintenance
1.4.2.1 Lubrication Data
1.4.2.2 Preventive Maintenance Plan and Schedule
1.4.3 Corrective Maintenance (Repair)
1.4.3.1 Troubleshooting Guides and Diagnostic Techniques
1.4.3.2 Wiring Diagrams and Control Diagrams
1.4.3.3 Maintenance and Repair Procedures
1.4.3.4 Removal and Replacement Instructions
1.4.3.5 Spare Parts and Supply Lists
1.4.4 Corrective Maintenance Work-Hours
1.4.5 Appendices
1.4.5.1 Product Submittal Data
1.4.5.2 Manufacturer's Instructions
1.4.5.3 O&M Submittal Data
1.4.5.4 Parts Identification
1.4.5.5 Warranty Information
1.4.5.6 Personnel Training Requirements
1.4.5.7 Testing Equipment and Special Tool Information
1.4.5.8 Testing and Performance Data
1.4.5.9 Contractor Information

1.5 SCHEDULE OF OPERATION AND MAINTENANCE DATA PACKAGES
1.5.1 Data Package 2
1.6 FAILURE TO SUBMIT OPERATIONS AND MAINTENANCE DATA
1.7 PAYMENT

PART 2 PRODUCTS

PART 3 EXECUTION

-- End of Section Table of Contents --

SECTION 01 78 23.00 25

OPERATION AND MAINTENANCE DATA

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 or as otherwise designated. 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 and Section 01 33 00, SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

O&M Manual Execution Plan; G

SD-10 Operation and Maintenance Data

Operation and Maintenance Manual; G

1.2 O&M MANUAL EXECUTION PLAN

1.2.1 General Requirements

Submit for approval a discussion detailing how the Contract requirements for Operation and Maintenance (O&M) Manuals, as set forth in this Section, will be met. Identify Contractor personnel who must be responsible for meeting the O&M submittal requirements in this Section and the Technical Sections of this Contract.

1.2.2 Project Schedule

Time required to accomplish the requirements of this Section must be included in the Project Schedule in accordance with Section 01 32 01.00 25, PROJECT SCHEDULE.

1.3 SUBMISSION OF OPERATION AND MAINTENANCE MANUAL DATA

a. Submit Operation and Maintenance (O&M) Data specifically applicable to this Contract and a complete and concise depiction of the provided equipment, product, or system, stressing and enhancing the importance of system interactions, troubleshooting, and long-term preventative maintenance and operation. The subcontractors must compile and prepare data and deliver to the Contractor prior to the training of Government personnel. The Contractor must compile and prepare aggregate O&M data including clarifying and updating the original sequences of operation to as-built conditions. Organize and present information in sufficient detail to clearly explain O&M requirements at the system, equipment, component, and subassembly level. Include troubleshooting data with error indications and the possible cause. Include an index preceding each submittal. Submit in accordance with this Section and Section 01 33 00, SUBMITTAL PROCEDURES.

b. Each system or piece of equipment must be covered in a single manual regardless of the number of suppliers or subcontractors involved. Data submitted for the manual is in addition to that furnished as shop drawings. At least 30 days prior to scheduled testing and training, submit three copies of above data for each electrical, mechanical, and electromechanical system or equipment.

c. Mark draft copies as "Draft". The Government will return one copy if "Approved" or "Returned for Correction" (Action Codes A or C). If "Returned for Correction" resubmit the corrected manual with two sets of additional data, for the manuals retained by the Government, within 30 days of the date the prior submittal was returned. Within 30 days of approval, submit five additional, complete copies identical to the "Approved" copy (for a total of 6 copies) and two electronic copies, in accordance with paragraph entitled Electronic O&M Manual.

1.3.1 Binder Requirements

1.3.1.1 General

Assemble O&M Manuals in a binder for 8 1/2- by 11-inch sheets with slide binding, swing hinge, or steel screwpost fastening. Binder dimensions must not exceed three inches in width or 11.75 inches in height, and must not have any protruding clasps, hooks, or other hardware. Loose-leaf ring binders and spiral bound manuals are not acceptable.

1.3.1.2 Labeling of Binders

a. Label each binder on the cover and spine with the Contract name, Contract number, location of project, and the system or piece of equipment covered by the manual.

b. Where multiple volumes are required, number sequentially on both the cover and spine. Include a brief description of the contents in the volume designation (i.e. Vol. 1 Mechanical, Vol. 2 Electrical, Vol. 3 HVAC).

1.3.2 Package Quality

Provide data for equipment in hard copy and electronic format. Documents must be fully legible and all pages of the original material must be included. Poor quality copies and material with hole punches obliterating the text or drawings will not be accepted.

1.3.2.1 Drawings

Shop assembly or special drawings for manuals and parts catalogs must be of a size that requires folding only in left to right coordinate. Furnish a permanent reproducible conforming to Section 01 33 00, SUBMITTAL PROCEDURES, for all drawings in addition to the five copies specified herein. Number each sheet and provide an index.

1.3.2.2 Manufacturer's Data

One master hard copy of the approved O&M manual(s) must contain all original documents including, but not limited to: standard catalog cuts, manufacturer's data, parts sheets, and illustrations. Non-permanent copies will not be accepted. Mark out all non-applicable data, such as description of other models and optional equipment not included. If

reference is made to other drawings or data they must be included. List equipment covered; the manufacturer; and name, address, and telephone number of the local representative.

1.3.3 Electronic O&M Manual

Subsequent to approval of the hard copy O&M Manual(s), submit files electronically. Assemble the electronic information in a single PDF file with data organized identically to the approved master hard copy.

1.3.4 Package Content

Data package content must include, but not be limited to, the requirements as shown in paragraph entitled SCHEDULE OF OPERATION AND MAINTENANCE DATA PACKAGES. Comply with the data package requirements specified in the individual Technical Sections, including the content of the packages and addressing each product, component, and system designated for data package submission. Commissioned items without a specified data package requirement in the individual technical Sections must use Data Package 4.

1.3.5 Changes to Submittals

Submit changes, additions, or revisions required by the Contracting Officer (CO) for final acceptance of submitted data within 30 calendar days of the notification of this change requirement. Furnish manufacturer-originated changes or revisions to submitted data if a component of an item is so affected subsequent to acceptance of the O&M Data.

1.4 TYPES OF INFORMATION REQUIRED IN O&M DATA PACKAGES

1.4.1 Operating Instructions

Include specific instructions, procedures, and illustrations for the following phases of operation for the installed model and features of each system:

1.4.1.1 Safety Precautions

List personnel hazards and equipment or product safety precautions for all operating conditions.

1.4.1.2 Operator Prestart

Include procedures required to install, set up, and prepare each system for use.

1.4.1.3 Startup, Shutdown, and Post-Shutdown Procedures

Provide narrative description for Startup, Shutdown, and Post-shutdown operating procedures including the control sequence for each procedure.

1.4.1.4 Normal Operations

Provide narrative description of Normal Operating Procedures. Include Control Diagrams with data to explain operation and control of systems and specific equipment.

1.4.1.5 Emergency Operations

Include Emergency Procedures for equipment malfunctions to permit a short period of continued operation or to shut down the equipment to prevent further damage to systems and equipment. Include Emergency Shutdown Instructions for fire, explosion, spills, or other foreseeable contingencies. Provide guidance and procedures for emergency operation of all utility systems including required valve positions, valve locations, and zones or portions of systems controlled.

1.4.1.6 Operator Service Requirements

Include instructions for services to be performed by the operator such as lubrication, adjustment, inspection, and recording gage readings.

1.4.1.7 Environmental Conditions

Include a list of Environmental Conditions (temperature, humidity, and other relevant data) that are best suited for the operation of each product, component, or system. Describe conditions under which the item equipment should not be allowed to run.

1.4.1.8 Manufacturer's Data and Parts Catalogs

Include all original standard catalog cuts, manufacturer's data, parts sheets, or illustrations. Parts catalogs must include identification, nomenclature, part numbers, required parts, recommended spare parts stocked, and spare parts supplied. Data must match equipment furnished. Standard catalog data will not be acceptable unless irrelevant parts are marked out and relevant parts are clearly identified.

1.4.2 Preventive Maintenance

Include the following information for preventive and scheduled maintenance to minimize corrective maintenance and repair for the installed model and features of each system. Include potential environmental and indoor air quality impacts of recommended maintenance procedures and materials.

1.4.2.1 Lubrication Data

Include preventative maintenance lubrication data, in addition to instructions for lubrication provided under paragraph entitled Operator Service Requirements:

a. A table showing recommended lubricants for specific temperature ranges and applications.

b. Charts with a schematic diagram of the equipment showing lubrication points, recommended types and grades of lubricants, and capacities.

c. A Lubrication Schedule showing service interval frequency.

1.4.2.2 Preventive Maintenance Plan and Schedule

Include manufacturer's schedule for routine preventive maintenance, inspections, tests, and adjustments required to ensure proper and economical operation and to minimize corrective maintenance. Provide manufacturer's projection of preventive maintenance work-hours on a daily,

weekly, monthly, and annual basis including craft requirements by type of craft. For periodic calibrations, provide manufacturer's specified frequency and procedures for each separate operation.

1.4.3 Corrective Maintenance (Repair)

Include manufacturer's recommended procedures and instructions for correcting problems and making repairs.

1.4.3.1 Troubleshooting Guides and Diagnostic Techniques

Include step-by-step procedures to promptly isolate the cause of typical malfunctions. Describe clearly why the checkout is performed and what conditions are to be sought. Identify tests or inspections and test equipment required to determine whether parts and equipment may be reused or require replacement.

1.4.3.2 Wiring Diagrams and Control Diagrams

Wiring diagrams and control diagrams must be point-to-point drawings of wiring and control circuits including factory-field interfaces. Provide a complete and accurate depiction of the actual job specific wiring and control work. On diagrams, number electrical and electronic wiring and pneumatic control tubing and the terminals for each type, identically to actual installation configuration and numbering.

1.4.3.3 Maintenance and Repair Procedures

Include instructions and a list of tools required to repair or restore the product or equipment to proper condition or operating standards.

1.4.3.4 Removal and Replacement Instructions

Include step-by-step procedures and lists of required tools and supplies for removal, replacement, disassembly, and assembly of components, assemblies, subassemblies, accessories, and attachments. Provide tolerances, dimensions, settings, and adjustments required. Instructions must include a combination of text and illustrations.

1.4.3.5 Spare Parts and Supply Lists

Include lists of spare parts and supplies required for maintenance and repair to ensure continued service or operation without unreasonable delays. Special consideration is required for facilities at remote locations. Identify spare parts and supplies that have a long lead-time to obtain.

1.4.4 Corrective Maintenance Work-Hours

Include manufacturer's projection of corrective maintenance work-hours including requirements by type of craft. Separately identify and tabulate corrective maintenance that requires participation of or completion by the equipment manufacturer.

1.4.5 Appendices

Provide information required below and information not specified in the preceding paragraphs but pertinent to the maintenance or operation of the product or equipment. Include the following:

1.4.5.1 Product Submittal Data

Provide a copy of all SD-03 Product Data submittals required in the applicable Technical Sections.

1.4.5.2 Manufacturer's Instructions

Provide a copy of all SD-08 Manufacturer's Instructions submittals required in the applicable Technical Sections.

1.4.5.3 O&M Submittal Data

Provide a copy of all SD-10 Operation and Maintenance Data submittals required in the applicable Technical Sections.

1.4.5.4 Parts Identification

Provide identification and coverage for all parts of each component, assembly, subassembly, and accessory of the end items subject to replacement. Include special hardware requirements, such as requirement to use high-strength bolts and nuts. Identify parts by make, model, serial number, and source of supply to allow reordering without further identification. Provide clear and legible illustrations, drawings, and exploded views to enable easy identification of the items. When illustrations omit the part numbers and description, both the illustrations and separate listing must show the index, reference, or key number that will cross-reference the illustrated part to the listed part. Group parts by components, assemblies, and subassemblies in accordance with the manufacturer's standard practice. Parts data may cover more than one model or series of equipment, components, assemblies, subassemblies, attachments, or accessories, such as typically shown in a master parts catalog.

1.4.5.5 Warranty Information

List and explain the various warranties and clearly identify the servicing and technical precautions prescribed by the manufacturers or Contract documents in order to keep warranties in force. Include warranty information for primary components such as the compressor of air conditioning system.

1.4.5.6 Personnel Training Requirements

Provide information, classroom, and field instructions available from the manufacturers that are needed for use in training Government personnel to properly operate and maintain the equipment and systems. These services must be directed by the Contractor, using the manufacturer's factory-trained personnel or qualified representatives. Give CO seven calendar days written notice of scheduled instructional services. Submit all instructional materials such as lists, static exhibits, and visual aids with the O&M Manuals.

1.4.5.7 Testing Equipment and Special Tool Information

Include information on test equipment required to perform specified tests and on special tools needed for the operation, maintenance, and repair of components.

1.4.5.8 Testing and Performance Data

Include completed prefunctional checklists, functional performance test forms, and monitoring reports. Include recommended schedule for retesting and blank test forms.

1.4.5.9 Contractor Information

Provide a list that includes the name, address, and telephone number of the General Contractor and each subcontractor who installed the product or equipment, or system. For each item, provide the name, address, and telephone number of the manufacturer's representative and service organization that can provide replacements most convenient to the project site. Provide the name, address, and telephone number of the product, equipment, and system manufacturers.

1.5 SCHEDULE OF OPERATION AND MAINTENANCE DATA PACKAGES

Furnish the O&M data packages specified in individual Technical Sections. The required information for each O&M data package must include, but not be limited to, the following:

1.5.1 Data Package 2

a. Safety precautions

b. Normal operations

c. Environmental conditions

d. Lubrication data

e. Preventive maintenance plan and schedule

f. Cleaning recommendations

g. Maintenance and repair procedures

h. Removal and replacement instructions

i. Spare parts and supply list

j. Parts identification

k. Warranty information

l. Government personnel training requirements

m. Contractor information.

1.6 FAILURE TO SUBMIT OPERATIONS AND MAINTENANCE DATA

Failure to furnish O&M Manual data as required is justification to hold or adjust the retained percentage in accordance with Contract Clause 52.232-5, PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS. Moreover, failure to furnish O&M Manual data as required may result in a final unsatisfactory overall performance rating, despite the nature of all other ratings.

1.7 PAYMENT

No partial payment will be made for compliance with this Section. All costs for hard copy and electronic O&M Manuals must be included in the Contract prices of the various items. The O&M Data will be jointly inspected for accuracy and completeness by the Government and a responsible representative of the Contractor prior to submission. Final payment will not be made until all eight, complete hard copies and two electronic copies of the O&M manuals have been accepted.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 78 39.00 25

PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.1 GENERAL INFORMATION
1.2 REFERENCES
1.3 SUBMITTALS
1.4 RECORD DRAWINGS EXECUTION PLAN
1.4.1 General Requirements
1.4.2 Project Schedule
1.5 WORKING AS-BUILT DRAWINGS
1.5.1 General
1.5.2 Monthly Meeting
1.6 DIGITAL IMAGES
1.7 CAD STANDARDS
1.8 PRELIMINARY RECORD DRAWINGS
1.8.1 Requirements
1.8.2 Review and Approval
1.8.2.1 Monthly Review
1.8.2.2 Final Working As-Built Drawings
1.9 FINAL RECORD DRAWINGS
1.9.1 General
1.9.2 Electronic Copies
1.9.2.1 General
1.9.2.2 Drafting Standards
1.10 PAYMENT

PART 2 PRODUCTS

PART 3 EXECUTION

-- End of Section Table of Contents --

SECTION 01 78 39.00 25

PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.1 GENERAL INFORMATION

This Section covers record drawings complete, as a requirement of the Contract. Record drawings are those which are revised by the Contractor to be used for preliminary and final record drawings submittals showing as-built conditions. Record drawings showing final as-built conditions of the work are defined, but not limited to:

a. Contract Drawings - Drawings created specifically for this Contract and provided to the Contractor upon Award. As-built drawings are copies of Contract drawings that are revised to show additions and changes occurring during construction, eventually becoming final record drawings.

b. Contractor Drawings - Drawings must include diagrammatic and design information provided by the Contractor and the Contractor's subcontractors, vendors, or suppliers which meet requirements of and provide additional details of the work required by the Contractor drawings, eventually becoming final record drawings.

c. Reference Drawings - Drawings provided to the Contractor upon Award for reference. Reference drawings are listed on the Reference Drawing Index sheet.

d. Designated Reference Drawings - Drawings designated to be verified and drawn in CAD by the Contractor to show final as-built conditions as part of this Contract. Designated Reference Drawings are listed on the Reference Drawing Index with Action Key. Only PDF files for designated reference drawings will be provided.

1.2 REFERENCES

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

U.S. ARMY CORPS OF ENGINEERS (USACE)

ERDC/ITL SR-23-1	(2019) A/E/C Graphics Stan - Release 2.2
ERDC/ITL SR-24-3	(2019) A/E/C Computer-Aided Design (CAD) Standard - Release 6.2

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. The following must be submitted in accordance with Section 01 33 00, SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Record Drawings Execution Plan; G

Working As-Built Drawings

SD-11 Closeout Submittals

Preliminary Record Drawings; G

Final Working As-Built Drawings; G

Final Record Drawings; G

1.4 RECORD DRAWINGS EXECUTION PLAN

1.4.1 General Requirements

Submit for approval a discussion detailing how the Contract requirements for Record Drawings, as set forth in this Section, will be met. Identify Contractor personnel who shall be responsible for maintaining marked up as-built conditions during the prosecution of the work and identify an authorized Contractor representative who will certify the monthly review in conjunction with periodic progress payments. Identify Contractor personnel who shall be responsible for meeting the Preliminary Record Drawing submittal requirements at the time of Final Inspection(s), the Final Record Drawings submittal requirements, and describe the process of how these requirements will be met. Include the name and contact information of service providers to the Record Drawings execution process if the requirements will be partially fulfilled by outside firms. The monthly Contractor-certified working as-built drawings will be signed by the CO and the authorized representative of the Contractor and must then be attached to the periodic progress payment request.

1.4.2 Project Schedule

Time required to accomplish the requirements of this Section must be included in the Project Schedule in accordance with Section 01 32 01.00 25, PROJECT SCHEDULE.

1.5 WORKING AS-BUILT DRAWINGS

1.5.1 General

a. During the execution of the work, mark up electronic set of Contract, Reference, Designated Reference, and Contractor and Shop Drawings in accordance with this Section and Section 01 33 00 SUBMITTAL PROCEDURES, Subparagraph entitled DRAWINGS, to show the current as-constructed conditions. Keep working as-built drawings current on a continuous basis and available on the job site at all times. By means of details and notes, accurately and neatly record changes, as they occur, from the Contract and Reference drawings that are made in the work and additional information uncovered in the course of construction. Mark up the electronic copy of the working as-built drawings, including details and notes, in accordance with the U.S. Army Corps of Engineers, Portland District As-built standards.

b. Working as-built drawings are part of the permanent records of this

Contract and will be retained by the Government upon approval. Record drawings must include, but not be limited to:

(1) Contract Drawings - Use working as-built Contract drawings, and additional drawings or sketches which may be required to thoroughly describe deviations or additions to the Contract Drawings, to revise the Government-provided Computer-Aided Design (CAD) Contract Drawings. Each As-built drawing must maintain the original size, format, and border sheet as provided by the Government, showing final as-constructed conditions.

(2) Contractor and Shop Drawings - Incorporate working as-built Contractor and Shop Drawing field conditions into the Final Record Drawing Package to ensure the ability to cross-reference between Contract, Reference, Designated Reference, and Shop Drawings.

(3) Designated Reference Drawings - Use working as-built Designated Reference Drawings to create new CAD drawings to show as-constructed revisions.

1.5.2 Monthly Meeting

Coordinate and Schedule monthly meeting with the Contracting Officer (CO) to review the current working as-built drawings for accuracy and completeness.

1.6 DIGITAL IMAGES

Provide digital images in JPEG format with a minimum of 300 pixels per inch (PPI) documenting the as-constructed state of the completed project for verification of the redlines. Provide images for buried or concealed work that can not otherwise be verified, and all electrical panels (to include all wire labels).Images must be provided for each plan, section, elevation, and detail drawing (including all Contractor-prepared Drawings). Organize images into folders by Contract drawing number.

1.7 CAD STANDARDS

a. Submit all CAD files and drawings in Autodesk AutoCAD, using the most current version at the time of solicitation.

b. All content produced through CAD authoring software must be compliant with the A/E/C CAD Standard, Release 6.2 (ERDC/ITL SR-24-3) and A/E/C Graphics Standard, Release 2.2 (ERDC/ITL SR-23-1). Utilize the guides, libraries, and templates available at the CAD/BIM Technology Center website https://cadbimcenter.erdc.dren.mil/default.aspx to produce the required deliverables.

c. Additions and corrections to the Contract and designated reference drawings must be equal in quality and detail to that of the original drawings. Format, line colors, line weights, line types, lettering, level names, symbols, sheet space, title block, and drawing border must be the same as that used on the original Contract and designated reference drawings. The folder structure, CAD file names, and reference file system must remain the same as the original drawing structure, system, and file naming convention.

1.8 PRELIMINARY RECORD DRAWINGS

1.8.1 Requirements

The following requirements relate to all systems provided under this Contract including, but not limited to: connections, distances, and components that interact with one another across an interface. Interfaces can be, but are not limited to: liquid, gaseous, steel, concrete, power transmission systems, transducers, digital signal processing, communications, and electrical. Drawing modifications and revisions must be in accordance with Paragraph CAD STANDARDS. The preliminary and final record drawings must show, but not be limited to:

a. Mechanical - Show interconnectivity between new equipment and existing equipment utilizing the National Standard naming conventions. Create or modify schematic diagrams to clearly show system configuration. Show spatial orientation and layout of new and existing mechanical equipment, including dimensions to adjacent structures and equipment, machinery foundations, associated electrical components, ductwork, and similar mechanical components. Show equipment details such as pump sizes, shaft sizes, motor sizes, type and configuration, corrosion prevention devices, piping, pumps, conduit, and valves.

b. Electrical - Provide Control Schematic, 3 Lines, One Line, and wiring diagram drawings to reflect as-constructed conditions. Accurately show locations of devices, cabling, wall mounted, alarm signal wires, Ethernet hubs, fiber-optic relay devices, panel layouts, enclosures, underground utilities, grounding, and embedded conduit. Utilize the Operating Project's labeling method, as coordinated with the CO, on wiring diagrams to show interconnectivity between new equipment and existing equipment. Create or modify schematic diagrams to clearly show circuits/runs from beginning to end of installed equipment/systems. Clearly show location of energy disconnects in relation to installed equipment/systems.

c. Modifications (include within change order price the cost to change working and final record drawings to reflect modifications).

d. Corrections related to approved RFI's and submittal variances.

e. Corrections resulting from final inspection(s).

1.8.2 Review and Approval

1.8.2.1 Monthly Review

Hold monthly meetings to review the current working as-built drawings for accuracy and completeness. The cover sheet must be signed and dated by authorized Contractor's representative to document and certify the review. The CO will also sign the cover sheet if attending the meeting. Discrepancies noted during the review must be amended prior to progress payment approval.

1.8.2.2 Final Working As-Built Drawings

Within 30 calendar days after final construction physical completion, submit complete as-built drawing redlines, marked "Draft". Allow 30 calendar days for Government review and approval. The CO will review

final working as-built drawings for accuracy and completeness and return them to the Contractor for required corrections, changes, additions, and deletions. If changes are required, make such revisions within 30 calendar days, and re-submit for review and approval. Final inspection will not be authorized to proceed until the Government has completed reviewing preliminary record drawings and determined they are acceptable.

1.9 FINAL RECORD DRAWINGS

1.9.1 General

Allow 30 calendar days for Government review and approval. The CO will review final record drawings for accuracy and completeness and return them to the Contractor for required corrections, changes, additions, and deletions. If revisions are required, make such revisions within 30 calendar days, and re-submit to the Government for review and approval. Electronic CAD and PDF files of the final record drawings and shop drawings submitted will become the property of the Government upon final approval.

1.9.2 Electronic Copies

1.9.2.1 General

Thirty calendar days from acceptance of the preliminary electronic CAD record drawings, submit a complete set of final electronic CAD files. Final record drawings must be in accordance with Paragraph CAD STANDARDS. Submit final record drawing files in the same format as originally provided by the Government. Electronic CAD files of existing Contract drawings contained in this Contract will be made available to the Contractor. Use working as-built drawings to revise Government-provided electronic drawings to show as-constructed revisions. A list of firms capable of performing this work is available on the ACEC of Oregon website at http://www.acecoregon.org/files/list_of_AutoCad-Microstation_firms.pdf. Publish final approved record drawings and shop drawings to Adobe PDF and include in the final record drawing package with data organized identically to the complete hard copy package.

1.9.2.2 Drafting Standards

a. General Drafting Standards. The drafting standards used in the provided CAD electronic files must be in accordance with Paragraph CAD STANDARDS. The Government will furnish the cell and font libraries and the standard border for use in preparing the drawings. Upon request, the Government will provide documentation and specific drafting requirements.

b. As-Built Drafting Standards:

(1) A record of revisions must remain in the title block; revision triangles are to be removed from the rest of the drawings.

(2) Add the final revision notation to the title block of "Record Drawings/As-Built Conditions" or "Revised Record Drawings/As-Built Conditions."

(3) Add as-built block to all drawings with information complete. A sample will be provided.

1.10 PAYMENT

a. Working as-built marked prints and electronic CAD files will be jointly inspected for accuracy and completeness by the CO and an authorized representative of the Contractor prior to submission of the monthly pay estimate. Failure to keep working as-built drawings and electronic CAD files maintained on a current basis, in accordance with Paragraphs WORKING AS-BUILT DRAWINGS and PRELIMINARY RECORD DRAWINGS, will be sufficient justification to withhold a percentage of the monthly pay estimate in an amount representing the estimated cost of completing the preliminary record drawings.

b. Separate payment will not be made for compliance with this Section for the preparation of the working as-built Contract, Shop, and Designated Reference drawing redlines. All costs associated with the working as-built drawing requirements of this Section are considered incidental to the work.

c. Final Record Drawings - No partial payment will be made. Full payment will be made upon acceptance of complete and final electronic and hard copy Final Record Drawings. Should the Contractor fail to provide the final record drawings as required, despite the nature of all other performance ratings, the Contractor may be issued a final unsatisfactory evaluation.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 05 - METALS

SECTION 05 50 14.00 25

METAL FABRICATIONS

PART 1 GENERAL

1.1 REFERENCES
1.2 SUBMITTALS
1.3 QUALITY ASSURANCE
1.3.1 Detail Drawings
1.3.2 Welding Qualifications

PART 2 PRODUCTS

2.1 FABRICATION
2.1.1 Steel Fabrication
2.1.1.1 Dimensional Tolerances for Work
2.1.1.2 Carbon Steel Fabrication
2.1.1.3 Stainless Steel Fabrication
2.1.2 Welding
2.1.2.1 Welding of Steel
2.1.2.1.1 Welding Procedures for Steel
2.1.2.1.2 Welding Process
2.1.2.1.3 Welding Technique
2.1.2.1.3.1 Filler Metal
2.1.2.1.3.2 Preheat and Interpass Temperature
2.1.2.1.3.3 Stress-Relief Heat Treatment
2.1.2.1.4 Workmanship
2.1.2.1.4.1 Preparation of Base Metal
2.1.2.1.4.2 Temporary Welds
2.1.2.1.4.3 Tack Welds
2.1.2.2 Welding of Steel Castings
2.1.2.3 Welding of Stainless Steel and Stainless Steel to Carbon Steel
2.1.3 Bolted Connections
2.1.3.1 Bolted Steel Connections
2.1.4 Machine Work
2.1.4.1 Finished Surfaces
2.1.4.2 Unfinished Surfaces
2.1.4.3 Bolt Holes
2.1.5 Miscellaneous Provisions
2.1.5.1 Cleaning of Corrosion-Resisting Steel
2.1.5.2 Lubrication
2.1.6 Shop Assembly
2.2 TESTS, INSPECTIONS, AND VERIFICATIONS
2.2.1 Nondestructive Testing
2.2.2 Tests of Machinery and Structural Units
2.2.3 Inspection of Steel Welding
2.2.3.1 Visual Examination
2.2.3.2 Nondestructive Testing

2.2.3.2.1 Testing Agency
2.2.3.2.2 Examination Procedures
2.2.3.2.2.1 Ultrasonic Testing
2.2.3.2.2.2 Magnetic Particle Inspection
2.2.3.2.2.3 Dye Penetrant Inspection
2.2.3.2.3 Welds to be Subject to Nondestructive Testing
2.2.3.3 Test Coupons
2.2.3.4 Supplemental Examination
2.2.4 Welding Repair Plan

PART 3 EXECUTION

3.1 INSTALLATION
3.1.1 Alignment and Setting
3.2 TESTS
3.2.1 Workmanship
3.2.2 Production Welding
3.3 PROTECTION OF FINISHED WORK
3.3.1 Machined Surfaces
3.3.2 Lubrication After Assembly

-- End of Section Table of Contents --

SECTION 05 50 14.00 25

METAL FABRICATIONS

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 FOR NONDESTRUCTIVE TESTING (ASNT)

ANSI/ASNT CP-189	(2020) ASNT Standard for Qualification and Certification of Nondestructive Testing Personnel

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME B4.1	(1967; R 1994; R 2004; R 2009; R 2020) Preferred Limits and Fits for Cylindrical Parts
ASME B46.1	(2020) Surface Texture, Surface Roughness, Waviness and Lay

AMERICAN WELDING SOCIETY (AWS)

AWS D1.1/D1.1M	(2025) Structural Welding Code - Steel
AWS D1.6/D1.6M	(2017) Structural Welding Code — Stainless Steel
AWS QC1	(2016) Specification for AWS Certification of Welding Inspectors

ASTM INTERNATIONAL (ASTM)

ASTM A380/A380M	(2025) Standard Practice for Cleaning, Descaling, and Passivation of Stainless Steel Parts, Equipment, and Systems
ASTM E165/E165M	(2023) Standard Practice for Liquid Penetrant Examination for General Industry
ASTM E709	(2021) Standard Guide for Magnetic Particle Testing
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

RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RCSC)

RCSC A348	(2020) RCSC Specification for Structural Joints Using High-strength Bolts

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-02 Shop Drawings

Detail Drawings; G, DO

Welding Procedures; G, DO

Welding Repair Plan

SD-03 Product Data

Filler Metal

Lubricant

SD-06 Test Reports

Tests, Inspections, and Verifications

SD-07 Certificates

Welding Qualifications

Weld Inspection Log

Certified Welding Inspector; G, DO

Nondestructive Testing Personnel; G, DO

1.3 QUALITY ASSURANCE

1.3.1 Detail Drawings

Submit detail drawings for metalwork and machine work, prior to fabrication, include within the detail drawings catalog cuts, templates, fabrication and assembly details and type, grade and class of material as appropriate. Indicate methods of protecting the work during shipping, storage, field assembly, and installation.

1.3.2 Welding Qualifications

Prior to welding, submit certification for each welder stating the type of welding and positions qualified for, the code and procedure qualified under, date qualified, and the firm and individual certifying the qualification tests. If the qualification date of the welder or welding operator is more than 6 months old, accompany the welding operator's

qualification certificate with a current certificate by the welder attesting to the fact that he has been engaged in welding since the date of certification, with no break in welding service greater than 6 months.

Conform to all requirements specified in AWS D1.1/D1.1M, or AWS D1.6/D1.6M as applicable to the material to be welded.

PART 2 PRODUCTS

2.1 FABRICATION

2.1.1 Steel Fabrication

Material must be straight before being laid off or worked. Perform straightening, if necessary, by methods that will not impair the metal. Sharp kinks or bends are cause for rejection of the material. Material with welds will not be accepted except where welding is definitely specified, indicated or otherwise approved. Make bends using approved dies, press brakes or bending rolls. Where heating is required, take precautions to avoid overheating the metal and allow it to cool in a manner that will not impair the original properties of the metal. Proposed flame cutting of material is subject to approval and must be indicated on detail drawings. Shearing must be accurate and all portions of the work neatly finished. Make corners square and true unless otherwise shown. Fillet re-entrant cuts to a minimum radius of 3/4 inch unless otherwise approved. Provide finished members free of twists, bends and open joints. Tighten bolts, nuts and screws.

2.1.1.1 Dimensional Tolerances for Work

Measure dimensions using an approved calibrated steel tape of approximately the same temperature as the material being measured. The overall dimensions of an assembled structural unit must be within the tolerances indicated on the drawings or as specified in the particular section of these specifications for the item of work. Where tolerances are not specified in other sections of these specifications or shown, an allowable variation of 1/32 inch is permissible in the overall length of component members with both ends milled; component members without milled ends must not deviate from the dimensions shown by more than 1/16 inch for members 30 feet or less in length, and by more than 1/8 inch for members over 30 feet in length.

2.1.1.2 Carbon Steel Fabrication

Carbon steel may be cut by mechanically guided or hand-guided torches, provided an accurate profile with a surface that is smooth and free from cracks and notches is obtained. Prepare surfaces and edges in accordance with AWS D1.1/D1.1M, Prequalification of WPSs Clause. Where carbon steel is not to be welded, chipping or grinding will not be required except as necessary to remove slag and sharp edges of mechanically guided or hand-guided cuts not exposed to view. Chip, grind or machine to sound metal hand-guided cuts which are to be exposed or visible.

2.1.1.3 Stainless Steel Fabrication

Stainless steel may be cut by mechanically guided or hand-guided torches, provided an accurate profile with a surface that is smooth and free from cracks and notches is obtained. Prepare surfaces and edges in accordance with AWS D1.6/D1.6M, Prequalification of WPSs Clause. Where stainless

steel is not to be welded, chipping or grinding will not be required except as necessary to remove slag and sharp edges of mechanically guided or hand-guided cuts not exposed to view. Chip, grind or machine to sound metal hand-guided cuts which are to be exposed or visible. Prevent carbon contamination by isolating carbon components from stainless components. Cross contamination will require repassivation.

2.1.2 Welding

2.1.2.1 Welding of Steel

2.1.2.1.1 Welding Procedures for Steel

Use prequalified welding procedures for steel as described in AWS D1.1/D1.1M, or AWS D1.6/D1.6M Prequalification of WPSs Clause or qualify by tests as prescribed in AWS D1.1/D1.1M or AWS D1.6/D1.6M, Qualification Clause as applicable. For welding procedures qualified by tests, the coupon welding and specimen testing will be witnessed and the test report document signed by the Contracting Officer. Approval of any welding procedure does not relieve the Contractor of the responsibility for producing a finished structure meeting all requirements of these specifications. The Contractor will be directed or authorized to make any changes in previously approved welding procedures that are deemed necessary or desirable by the Contracting Officer.

a. Submit a complete schedule of welding procedures for each steel structure to be welded prior to commencing fabrication. Provide the schedule in conformance with the requirements specified in the provisions of AWS D1.1/D1.1M or AWS D1.6/D1.6M as applicable.

b. Provide within the schedule detailed procedure specifications and tables or diagrams showing the procedures to be used for each required joint. Include in the welding procedures filler metal, preheat, interpass temperature and stress-relief heat treatment requirements. Clearly identify each welding procedure as being prequalified or required to be qualified by tests.

c. Show types and locations of welds designated or in the specifications to receive nondestructive testing in the welding procedures.

2.1.2.1.2 Welding Process

Perform welding of steel by an electric arc welding process using a method which excludes the atmosphere from the molten metal and conforms to the applicable provisions of AWS D1.1/D1.1M or AWS D1.6/D1.6M as applicable for the material to be welded. Minimize residual stresses, distortion and shrinkage from welding.

2.1.2.1.3 Welding Technique

2.1.2.1.3.1 Filler Metal

Provide the electrode, electrode-flux combination and grade of filler metal conforming to the appropriate AWS specification for the base metal and welding process being used or be as shown where a specific choice of AWS specification allowables is required. Submit filler metal product data. Include the AWS designation of the electrodes to be used in the schedule of welding procedures. Use only low hydrogen electrodes for manual shielded metal-arc welding regardless of the thickness of the

steel. Use a controlled temperature storage oven at the job site as prescribed by AWS D1.1/D1.1M or AWS D1.6/D1.6M, Fabrication Clause to maintain low moisture of low hydrogen electrodes.

2.1.2.1.3.2 Preheat and Interpass Temperature

Perform preheating as required by AWS D1.1/D1.1M or AWS D1.6/D1.6M, Fabrication Clause or as otherwise specified except that the temperature of the base metal must be at least 70 degrees F. Slowly and uniformly preheat the joint area by approved means to the prescribed temperature, held at that temperature until the welding is completed and then permitted to cool slowly in still air.

2.1.2.1.3.3 Stress-Relief Heat Treatment

Where stress relief heat treatment is specified or shown, perform in accordance with the requirements of AWS D1.1/D1.1M or AWS D1.6/D1.6M, Fabrication Clause unless otherwise authorized or directed.

2.1.2.1.4 Workmanship

Perform welding workmanship in accordance with AWS D1.1/D1.1M or AWS D1.6/D1.6M, Fabrication Clause and other applicable requirements of these specifications.

2.1.2.1.4.1 Preparation of Base Metal

Prior to welding inspect surfaces to be welded to ensure compliance with AWS D1.1/D1.1M or AWS D1.6/D1.6M, Fabrication Clause.

2.1.2.1.4.2 Temporary Welds

Make temporary welds, required for fabrication and erection, under the controlled conditions prescribed for permanent work. Make temporary welds using low-hydrogen welding electrodes and by welders qualified for permanent work as specified in these specifications. Conduct preheating for temporary welds as required by AWS D1.1/D1.1M or AWS D1.6/D1.6M for permanent welds except that the minimum temperature must be 120 degrees F in any case. In making temporary welds, do not strike arcs in other than weld locations. Remove each temporary weld and grind flush with adjacent surfaces after serving its purpose.

2.1.2.1.4.3 Tack Welds

Tack welds that are to be incorporated into the permanent work are to exhibit the same quality requirements as the permanent welds; clean and thoroughly fuse them with permanent welds. Perform preheating as specified above for temporary welds. Provide cascaded ends on multiple-pass tack welds. Remove defective tack welds before permanent welding.

2.1.2.2 Welding of Steel Castings

Remove unsound material from the surfaces of steel castings, to be incorporated into welded connections, by chipping, machining, air-arc gouging or grinding. Do not weld major connections designed for transfer of stresses if the temperature of the casting is lower than 100 degrees F. Preheat castings containing over 0.35 percent carbon or over 0.75 percent manganese to a temperature not to exceed 450 degrees F and conduct welding

while the castings are maintained at a temperature above 350 degrees F. Welding is not permitted on castings containing carbon in excess of 0.45 percent except on written authorization. Castings requiring welding repairs after the first annealing and castings involving welding fabrication must be stress-relieved annealed prior to receiving final machining unless otherwise permitted.

2.1.2.3 Welding of Stainless Steel and Stainless Steel to Carbon Steel

Welding of stainless steel and stainless steel to carbon steel must conform to the requirements of AWS D1.6/D1.6M. Submit a certified report giving the results of the qualifying tests, and a complete schedule of the welding process for each steel fabrication to be welded prior to commencing fabrication.

2.1.3 Bolted Connections

2.1.3.1 Bolted Steel Connections

Provide bolts, nuts and washers of the type specified or indicated. Equip all nuts with washers except for high strength bolts. Use beveled washers where bearing faces have a slope of more than 1:20 with respect to a plane normal to the bolt axis. Where the use of high strength bolts is specified or indicated, conform the materials, workmanship and installation to the applicable provisions of ASTM F3125/F3125M. Install High Strength Bolts ASTM F3125/F3125M Grade A325 or Grade A490 in accordance with the requirements of RCSC A348. All High Strength Bolted Connections are fully pretensioned to the minimum pretension as specified in RCSC A348. Follow the pre-installation verification procedures outlined in RCSC A348. All other bolted connections are snug tight in accordance with RCSC A348.

a. Accurately locate bolt holes, smooth, perpendicular to the member and cylindrical.

b. Drill or subdrill holes for regular bolts and ream in the shop and not more than 1/16 inch larger than the diameter of the bolt.

c. Match-ream or drill holes for fitted bolts in the shop. Remove burrs resulting from reaming. Keep bolt threads entirely outside of the holes. The body diameter of bolts must have tolerances as recommended by ASME B4.1 for the class of fit specified. Place fitted bolts in reamed holes by selective assembly to provide an LN-2 fit.

d. Holes for high strength bolts must not have diameters more than 1/16 inch larger than bolt diameters. If the thickness of the material is not greater than the diameter of the bolts, the holes may be punched. If the thickness of the material is greater than the diameter of the bolts the holes may be drilled full size or subpunched or subdrilled at least 1/8 inch smaller than the diameter of the bolts and then reamed to full size. Poor matching of holes will be cause for rejection. Drifting occurring during assembly cannot distort the metal or enlarge the holes. Reaming to a larger diameter of the next standard size bolt will be allowed for slight mismatching.

2.1.4 Machine Work

a. Tolerances, allowances and gauges for metal fits between plain, non-threaded, cylindrical parts conform to ASME B4.1 for the class of

fit shown or required unless otherwise shown on approved detail drawings. Where fits are not shown they will be suitable as approved. Tolerances for machine-finished surfaces designated by non-decimal dimensions must be within 1/64 inch. Tolerances for machine-finished surfaces designated by decimal dimensions must be as follows unless otherwise specified:

1 place......0.030

2 places.....0.030

3 places.....0.010

b. Sufficient machining stock will be allowed on placing pads to ensure true surfaces of solid material. Provide finished contact or bearing surfaces true and exact to secure full contact. Polish journal surfaces and finish all surfaces with sufficient smoothness and accuracy to ensure proper operation when assembled. Accurately machine parts entering any machine and all like parts be interchangeable except that parts assembled together for drilling or reaming of holes or machining will not be required to be interchangeable with like parts.

2.1.4.1 Finished Surfaces

Provide surface finishes, indicated or specified, in accordance with ASME B46.1. Values of required roughness heights are arithmetical average deviations expressed in microinches. These values are maximum. Lesser degrees will be satisfactory unless otherwise indicated. Compliance with surface requirements is determined by sense of feel and visual inspection of the work compared to Roughness Comparison Specimens in accordance with the provisions of ASME B46.1. Values of roughness width and waviness height must be consistent with the general type of finish specified by roughness height. Where the finish is not indicated or specified use that which is most suitable for the particular surface, provide the class of fit required and be indicated on the detail drawings by a symbol which conforms to ASME B46.1 when machine finishing is provided. Flaws such as scratches, ridges, holes, peaks, cracks or checks which make the part unsuitable for the intended use will be cause for rejection.

2.1.4.2 Unfinished Surfaces

Lay out all work to secure proper matching of adjoining unfinished surfaces unless otherwise directed. Where there is a large discrepancy between adjoining unfinished surfaces chip and grind smooth or machine to secure proper alignment. Unfinished surfaces must be true to the lines and dimensions shown and be chipped or ground free of all projections and rough spots. Fill in depressions or holes not affecting the strength or usefulness of the parts in an approved manner.

2.1.4.3 Bolt Holes

Bolt holes must be accurately located, smooth, cylindrical, and perpendicular to the member. The work must be done to ensure the interchangeability of parts. Holes for bolts must have diameters not more than 1/16-inch larger than bolt diameters, unless required by the Contractor's design or contract or reference drawings. Holes that do not match with 1/64" will be cause for rejection. Hole location drifting occurring during manufacturing must not distort the metal or enlarge the

holes.

a. If the thickness of the material is not greater than the diameter of the bolt: Holes may be punched.

b. If the thickness of the material is greater than the diameter of the bolt: Holes may be drilled full size or sub-punched or sub-drilled at least 1/8-inch smaller than the diameter of the bolts and then reamed to full size.

2.1.5 Miscellaneous Provisions

2.1.5.1 Cleaning of Corrosion-Resisting Steel

Remove oil, paint and other foreign substances from corrosion-resisting steel surfaces after fabrication. Perform cleaning by vapor degreasing or by the use of cleaners of the alkaline, emulsion or solvent type. After the surfaces have been cleaned give a final rinsing with clean water followed by a 24 hour period during which the surfaces are intermittently wet with clean water and then allowed to dry for the purpose of inspecting the clean surfaces. Visually inspect the surfaces for evidence of paint, oil, grease, welding slag, heat treatment scale, iron rust or other forms of contamination. If evidence of foreign substance is found, clean again in accordance with the applicable provisions of ASTM A380/A380M. Furnish the proposed method of treatment for approval. Visually reinspect after treatment. Use only stainless steel or nonmetallic bristle brushes to remove foreign substances. Remove any contamination occurring subsequent to the initial cleaning by one or more of the methods indicated above.

2.1.5.2 Lubrication

Provide the arrangement and details for lubrication as indicated. Thoroughly clean and lubricate, with an appropriate lubricant, all bearing surfaces before erection or assembly. Prior to use of the lubricant submit for approval product data supporting its use in the assembly that includes the following lubricating properties as they apply, temperature range, protection against corrosion, ability to remain in bearing, ability to seal out contaminants, cooling and friction.

2.1.6 Shop Assembly

Assemble each machinery and structural unit furnished in the shop to determine the correctness of the fabrication and matching of the component parts unless otherwise specified. Do not exceed those tolerances shown. Closely check each unit assembled to ensure that all necessary clearances have been provided and that binding does not occur in any moving part. Assembly in the shop must be in the same position as final installation in the field unless otherwise specified. Perform assembly and disassembly work in the presence of the Contracting Officer unless waived in writing. Immediately remedy errors or defects disclosed by the Contractor without cost to the Government. Before disassembly for shipment match-mark each piece of a machinery or structural unit to facilitate erection in the field. Indicate the location of match-marks by circling with a ring of white paint after the shop coat of paint has been applied or as otherwise directed.

2.2 TESTS, INSPECTIONS, AND VERIFICATIONS

Perform material tests and analyses certified by an approved laboratory to

demonstrate that materials are in conformity with the specifications. These tests and analyses must be performed and certified at the Contractor's expense. Perform tests, inspections, and verifications conforming to the requirements of the particular sections of these specifications for the respective items of work unless otherwise specified or authorized. Conduct tests in the presence of the Contracting Officer if so required. Furnish specimens and samples for additional independent tests and analyses upon request by the Contracting Officer. Properly label specimens and samples and prepare for shipment. Submit certified test reports for materials with all materials delivered to the site.

2.2.1 Nondestructive Testing

When doubt exists as to the soundness of any material part, such part may be subjected to any form of nondestructive testing determined by the Contracting Officer. This may include ultrasonic, magnaflux, dye penetrant, x-ray, gamma ray or any other test that will thoroughly investigate the part in question. The cost of such investigation will be borne by the Government if the part is found to be sound and by the Contractor if the part is found to be defective. Any defects will be cause for rejection; replace and retest rejected parts at the Contractor's expense.

2.2.2 Tests of Machinery and Structural Units

The details for tests of machinery and structural units must conform to the requirements of the particular sections of these specifications covering these items. Assemble each complete machinery and structural unit and test them in the shop, in the presence of the Contracting Officer, unless otherwise directed. Waiving of tests does not relieve the Contractor of responsibility for any fault in operation, workmanship or material that occurs before the completion of the contract or guarantee. After being installed at the site, operate each complete machinery or structural unit through a sufficient number of complete cycles to demonstrate to the satisfaction of the Contracting Officer that it meets the specified operational requirements in all respects.

2.2.3 Inspection of Steel Welding

Nondestructive testing of designated welds will be required. Supplemental examination of any joint or coupon cut from any location in any joint may also be required.

2.2.3.1 Visual Examination

All visual inspection will be conducted in accordance with AWS D1.1/D1.1M or AWS D1.6/D1.6M, by a Certified Welding Inspector. Document this inspection in the Visual Weld Inspection Log. Submit certificates indicating that certified welding inspectors meet the requirements of AWS QC1.

2.2.3.2 Nondestructive Testing

Perform as designated or described in the sections of these specifications, the nondestructive testing of shop and field welds covering the particular items of work. Record final nondestructive testing results in the Weld Inspection Log which identifies final NDT inspection of all welds requiring inspection and submit the log.

2.2.3.2.1 Testing Agency

The nondestructive testing of welds and the evaluation of tests as to the acceptability of the welds must be performed by a testing agency adequately equipped and competent to perform such services or by the Contractor using suitable equipment and qualified personnel. All personnel performing nondestructive testing must be certified Level I or II in the method of NDT being utilized in accordance with ANSI/ASNT CP-189. Level I inspectors must have direct supervision of a Level II inspector. Submit certification for nondestructive testing personnel prior to all testing. In either case, written approval of the examination procedures is required and performance of the examination tests must be done in the presence of the Contracting Officer. The evaluation of tests are subject to the approval and all records become the property of the Government.

2.2.3.2.2 Examination Procedures

Conform to the following requirements.

2.2.3.2.2.1 Ultrasonic Testing

Examine, evaluate and report ultrasonic testing of welds in conformance to the requirements of AWS D1.1/D1.1M or AWS D1.6/D1.6M, Inspection Clause, for cyclically loaded connections. Provide ultrasonic equipment capable of making a permanent record of the test indications. Make a record of each weld tested.

2.2.3.2.2.2 Magnetic Particle Inspection

Conform magnetic particle inspection of welds to the applicable provisions of ASTM E709.

2.2.3.2.2.3 Dye Penetrant Inspection

Perform dye penetrant inspection of welds conforming to the applicable provisions of ASTM E165/E165M.

2.2.3.2.3 Welds to be Subject to Nondestructive Testing

Test 50 percent of CJP welds using ultrasonic testing per Table 6.2 of AWS D1.1/D1.1M or AWS D1.6/D1.6M. Randomly test 50 percent of all PJP and fillet welds or as indicated by magnetic particle or dye penetrant testing.

2.2.3.3 Test Coupons

The Government reserves the right to require the Contractor to remove coupons from completed work when doubt as to soundness cannot be resolved by nondestructive testing. When coupons are removed from any part of a structure, repair the members cut in a neat manner with joints of the proper type to develop the full strength of the members. Peen repaired joints as approved or directed to relieve residual stress. The expense for removing and testing coupons, repairing cut members and the nondestructive testing of repairs is borne by the Government or the Contractor in accordance with the Contract Clauses INSPECTION AND ACCEPTANCE.

2.2.3.4 Supplemental Examination

When the soundness of any weld is suspected of being deficient due to

faulty welding or stresses that might occur during shipment or erection, the Government reserves the right to perform nondestructive supplemental examinations before final acceptance. The cost of such inspection will be borne by the Government.

2.2.4 Welding Repair Plan

Repair defective welds in accordance with AWS D1.1/D1.1M or AWS D1.6/D1.6M, Fabrication Clause as applicable. Remove defective weld metal to sound metal by use of air carbon-arc or oxygen gouging. Thoroughly clean surfaces before welding. Retest welds that have been repaired by the same methods used in the original inspection. Except for the repair of members cut to remove test coupons and found to have acceptable welds costs of repairs and retesting will be borne by the Contractor. Submit welding repair plans for steel, prior to making repairs.

PART 3 EXECUTION

3.1 INSTALLATION

Thoroughly clean all parts to be installed. Remove packing compounds, rust, dirt, grit and other foreign matter. Clean holes and grooves for lubrication. Examine enclosed chambers or passages to make sure that they are free from damaging materials. Where units or items are shipped as assemblies they will be inspected prior to installation. Disassembly, cleaning and lubrication will not be required except where necessary to place the assembly in a clean and properly lubricated condition. Do not use pipe wrenches, cold chisels or other tools likely to cause damage to the surfaces of rods, nuts or other parts used for assembling and tightening parts. Tighten bolts and screws firmly and uniformly but take care not to overstress the threads. When a half nut is used for locking a full nut place the half nut first followed by the full nut. Lubricate threads of all bolts except high strength bolts, nuts and screws with an appropriate lubricant before assembly. Coat threads of corrosion-resisting steel bolts and nuts with an approved antigalling compound. Driving and drifting bolts or keys will not be permitted.

3.1.1 Alignment and Setting

Accurately align each machinery or structural unit by the use of steel shims or other approved methods so that no binding in any moving parts or distortion of any member occurs before it is fastened in place. The alignment of all parts with respect to each other must be true within the respective tolerances required. Set true machines to the elevations shown.

3.2 TESTS

3.2.1 Workmanship

Workmanship must be of the highest grade and in accordance with the best modern practices to conform with the specifications for the item of work being furnished.

3.2.2 Production Welding

Perform production welding conforming to the requirements of AWS D1.1/D1.1M or AWS D1.6/D1.6M, as applicable. Studs, on which pre-production testing is to be performed, must be welded in the same general position as required on production items (flat, vertical, overhead or sloping). Test

and production stud welding will be subjected to visual examination or inspection. If the reduction of the length of studs becomes less than normal as they are welded, stop welding immediately and do not resume until the cause has been corrected.

3.3 PROTECTION OF FINISHED WORK

3.3.1 Machined Surfaces

Thoroughly clean foreign matter off machined surfaces. Protect all finished surfaces. Oil and wrap unassembled pins and bolts with moisture resistant paper or protect them by other approved means. Wash finished surfaces of ferrous metals to be in bolted contact, with an approved rust inhibitor and coat them with an approved rust resisting compound for temporary protection during fabrication, shipping and storage periods. Paint finished surfaces of metals which will be exposed after installation, except corrosion resisting steel or nonferrous metals as specified in Section 09 97 02.00 25 PAINTING: HYDRAULIC STRUCTURES.

3.3.2 Lubrication After Assembly

After assembly fill all lubricating systems with the appropriate lubricant and apply additional lubricant at intervals as required to maintain the equipment in satisfactory condition until acceptance of the work.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 09 - FINISHES

SECTION 09 97 02.00 25

PAINTING

PART 1 GENERAL

1.1 LUMP SUM PRICE
1.1.1 Painting: Hydraulic Structures
1.1.1.1 Payment
1.1.1.2 Unit of Measure
1.2 REFERENCES
1.3 SAFETY, HEALTH, AND ENVIRONMENTAL REQUIREMENTS
1.3.1 Safety
1.3.1.1 Abrasive Blasting
1.3.1.2 Workers Other Than Blasters
1.3.1.3 Cleaning Before and After Abrasive Blasting
1.3.1.4 Pretreatment of Metals and Concrete with Acids
1.3.1.5 Paint Mixing
1.3.1.6 Confined Spaces
1.3.1.7 Paint Spraying
1.3.1.8 Explosion Proof Equipment
1.3.1.9 Further Precautions
1.3.1.10 Ignition Sources
1.3.2 Health
1.3.2.1 Air Monitoring
1.3.2.2 Medical Status
1.3.2.3 Change in Medical Status
1.3.3 Environmental Protection
1.3.3.1 Waste Classification, Handling, and Disposal
1.3.3.2 Containment
1.3.3.3 Visible Emissions Monitoring
1.3.3.4 PM-10 Monitoring
1.3.3.5 TSP Monitoring
1.3.3.6 Water Quality
1.4 SUBMITTALS
1.5 QUALIFICATIONS
1.5.1 Certified Environmental, Health, and Safety (EHS) Professionals
1.5.2 Certified Lead Laboratory
1.5.3 Qualified Painting Contractor
1.5.4 Qualified Hazardous Paint Removal Contractor
1.5.5 Qualified Shop Painting Contractor
1.5.6 Qualified Coating Applicator
1.5.6.1 Certification Test Procedure
1.5.6.2 Certification Criteria
1.5.7 Coating Thickness Gage Qualification
1.5.8 Certified Coating Inspector
1.6 DELIVERY, STORAGE, AND HANDLING
1.7 AMBIENT CONDITIONS

PART 2 PRODUCTS

2.1 PRODUCT SAMPLES

PART 3 EXECUTION

3.1 CLEANING AND PREPARATION OF SURFACES TO BE PAINTED
3.1.1 General Requirements
3.1.2 Ferrous Surfaces Subject to Atmospheric Exposures
3.1.2.1 Coated Ferrous Surfaces Subject to Atmospheric Exposures
3.1.3 Ferrous Surfaces Subject to Severe Exposure
3.1.4 Damp and Wet Ferrous Metal Surfaces
3.1.5 Non-Ferrous Metal Surfaces
3.2 PAINT APPLICATION
3.2.1 General
3.2.2 Mixing and Thinning of Coatings other than the Vinyl Formulations
3.2.3 Time between Surface Preparation and Painting
3.2.4 Method of Paint Application
3.2.5 Coverage and Film Thickness
3.2.6 Coating Thickness Measurement on Metal
3.2.7 Progress of Painting Work
3.2.8 Contacting Surfaces
3.2.9 Drying Time Prior to Immersion
3.2.10 Protection of Painted Surfaces
3.3 PAINT SYSTEMS APPLICATION
3.3.1 Fabricated and Assembled Items
3.3.2 Surface Preparation
3.3.3 System No. 21-A-Z
3.3.4 Protection of Nonpainted Items and Cleanup
3.4 INSPECTION
3.5 PAINTING SCHEDULES

-- End of Section Table of Contents --

SECTION 09 97 02.00 25

PAINTING

PART 1 GENERAL

1.1 LUMP SUM PRICE

1.1.1 Painting: Hydraulic Structures

1.1.1.1 Payment

Payment will be made for costs associated with "Painting", which includes full compensation for furnishing all materials, equipment, and labor required to paint the specified components in accordance with this section.

1.1.1.2 Unit of Measure

Unit of measure: lump sum.

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 D4228	(2005; R 2017) Standard Practice for Qualification of Coating Applicators for Application of Coatings to Steel Surfaces
ASTM D4417	(2021) Standard Test Methods for Field Measurement of Surface Profile of Blast Cleaned Steel
ASTM D7091	(2021) 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

INTERNATIONAL SAFETY EQUIPMENT ASSOCIATION (ISEA)

ANSI/ISEA Z87.1	(2020) Occupational and Educational Personal Eye and Face Protection Devices
ANSI/ISEA Z358.1	(2014; R 2020) American National Standard for Emergency Eyewash and Shower Equipment

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70	(2023; ERTA 1 2024; TIA 24-1; TIA 25-2) National Electrical Code

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)

NIOSH 2003-154	(2003; 4th Ed; Supple 3) NIOSH Manual of Analytical Methods

SOCIETY FOR PROTECTIVE COATINGS (SSPC)

SSPC 7/NACE No.4	(2007) Brush-Off Blast Cleaning
SSPC Guide 6	(2021) Guide for Containing Surface Preparation Debris Generated During Paint Removal Operations
SSPC PA 2	(2015; E 2018) Procedure for Determining Conformance to Dry Coating Thickness Requirements
SSPC Paint 40	(2019) Zinc-Rich Moisture-Cure Polyurethane Primer, Performance-Based
SSPC QP 1	(2019) Standard Procedure for Evaluating the Qualifications of Industrial/Marine Painting Contractors (Field Application to Complex Industrial Steel Structures and Other Metal Components)
SSPC QP 2	(2019) Standard Procedure for Evaluating the Qualifications of Industrial/Marine Painting Contractors (Removal of Hazardous Coatings from Structures)
SSPC QP 3	(2010) Standard Procedure for Evaluating Qualifications of Shop Painting Applicators
SSPC SP 1	(2015) Solvent Cleaning
SSPC SP 3	(2024) Power Tool Cleaning
SSPC SP 5/NACE No. 1	(2007) White Metal Blast Cleaning
SSPC SP 6/NACE No.3	(2007) Commercial Blast Cleaning
SSPC SP 16	(2010) Brush-Off Blast Cleaning of Coated and Uncoated Galvanized Steel, Stainless Steels, and Non-Ferrous Metals

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2024) Safety -- Safety and Occupational Health (SOH) Requirements

U.S. DEPARTMENT OF DEFENSE (DOD)

MIL-DTL-24441	(2009; Rev D; Notice 1 2021) Paint, Epoxy-Polyamide, General Specification for

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 1910.94	Ventilation
29 CFR 1910.134	Respiratory Protection
29 CFR 1910.146	Permit-required Confined Spaces
29 CFR 1926.62	Lead
40 CFR 50.6	National Primary and Secondary Ambient Air Quality Standards for PM10
40 CFR 50.12	National Primary and Secondary Ambient Air Quality Standards for Lead
40 CFR 58	Ambient Air Quality Surveillance
40 CFR 60	Standards of Performance for New Stationary Sources
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 apply. This paragraph supplements the health, safety, and environmental requirements of EM 385-1-1.

1.3.1 Safety

Submit an Accident Prevention 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.

1.3.1.1 Abrasive Blasting

For abrasive blasting comply with the requirements in Section 06.I of EM 385-1-1. 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. Join hose lengths together by approved couplings of a material and type designed to prevent erosion and weakening of the couplings. The couplings and nozzle attachments must fit on the outside of the hose and be 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. Use MSHA/NIOSH-approved half-face or full-face air purifying respirators equipped with high-efficiency particulate air (HEPA) filters and eye protection meeting ANSI/ISEA Z87.1. Use 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. Provide personal protective equipment 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

Cleaning with compressed air must be in accordance with Section 20.B.5 of EM 385-1-1 and personnel 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 must be in accordance with 29 CFR 1910.94, paragraph (c)(5).

1.3.1.4 Pretreatment of Metals and Concrete with Acids

Personnel must 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

Provide local exhaust ventilation in the area where coatings are mixed. This ventilation system must be capable of providing at least 100 linear fpm
of capture velocity in the mixing zone. Avoid exposure of skin and eyes by wearing appropriate chemically resistant gloves, safety goggles, and face shields meeting the requirements of ANSI/ISEA Z87.1. Provide a personal eyewash unit within close proximity to the mixing operation in accordance with ANSI/ISEA Z358.1, paragraph (9). All powered mixing equipment must be either pneumatic or double insulated (intrinsically safe), in order to guard against fire or explosion. Individuals who have a history of, or develop a sensitivity to epoxy or polyurethane resin systems, must 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. Provide ventilation to exchange air in the space at a minimum rate of 5,000 cubic feet per minute per spray gun in operation. 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. A suitable means of egress must be maintained at all times. 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. Check the effectiveness of the ventilation by using ventilation smoke tubes and making frequent oxygen and combustible gas readings during painting operations. Exhaust ducts must 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 6H, Section 34. The procedures must include:

a. Certificates of calibration for all testing and monitoring equipment. The certificates of calibration must 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. Engineering controls and other work practices designed to reduce airborne hazardous chemical exposures to a minimum.

d. Specification of the design and installation of ventilation systems which provide adequate oxygen content and provide for the dilution of paint solvent vapor, lead, and other toxic particulates within the confined space. Procedures must also 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 EM 385-1-1, Section 05.G. During all spray painting operations, spray painters must use approved SCBA or SAR (air line) respirators, unless valid air sampling has demonstrated contaminant levels to be consistently within concentrations compatible with the Assigned Protection Factor (APF) of an air-purifying respirator. Persons with facial hair that may interfere with the seal or valve function of a half or full facepiece style respirator may wear a hood or helmet respirator provided the APF is sufficient for the exposure. Air-purifying chemical cartridge/canister 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 solvent cleaning. 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, must be used.

1.3.1.8 Explosion Proof Equipment

Electrical wiring, lights, and other equipment located in the paint spraying areas must 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, must not spark and must conform to the provisions for Class I, Division 2, Group D, hazardous locations. Electric motors used to drive exhaust fans must not be placed inside spraying areas or ducts. Fan blades and portable air ducts must be constructed of nonferrous materials. Properly maintain and ground motors and associated control equipment. Electrically bond and ground the metallic parts of all air-moving devices, spray guns, connecting tubing, and duct work.

1.3.1.9 Further Precautions

a. Workers must wear nonsparking safety shoes.

b. Solvent drums taken into the spraying area must be grounded. 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. 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 Ignition Sources

Ignition sources, including lighted cigarettes, cigars, pipes, matches, or cigarette lighters, and electronic smoking devices are prohibited in areas 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 must 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), that will be used to conduct the analysis of any collected air samples.

1.3.2.2 Medical Status

Prior to the start of work, and annually thereafter, submit a Report of Medical Status Records. This report will certify that Medical Status Records, in accordance with the requirements below are maintained for all required employees. The Contractor-maintained Medical Status Reports will document the medical evaluation of all 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. The Contractor-maintained Records must include the employee's name, the tests performed and the name of the physician responsible for performing the tests, and a physician's statement that medical status would permit specific task performance. Maintain medical records as required by 29 CFR 1910.20. The evaluation must 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 85 dBA.

b. Vision screening of employees who will require eye protection (employees who use full-facepiece respirators cannot wear contact lenses).

c. Medical evaluation of employees who will be required to wear respiratory protection must include, but is not 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.

(5) For lead-based paint removal, prepare and submit a Worker Protection Plan in accordance with the requirements of 29 CFR 1926.62, addressing all necessary aspects of worker protection. The plan must include medical screening, 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.

1.3.2.3 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 must 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. Maintain Change in Medical Status Records detailing any negative changes in employee medical status and the results of the physicians reevaluation statement. Submit a Change in Medical Status Report detailing the negative changes in medical status and a summary of the physician's reevaluation without including personal information of the impacted employee.

1.3.3 Environmental Protection

In addition to the requirements of Section 01 57 19.00 25 TEMPORARY ENVIRONMENTAL CONTROLS, prepare an Environmental Protection Plan incorporating the submittals for Water Quality Plan, Containment Plan, Waste Disposal Plan, Soil Quality Plan, TSP Monitoring Plan, PM-10 Monitoring Plan, and Visible Emissions Monitoring Plan. The submitted plan must 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. Regardless of the results of 40 CFR 261 App II, Mtd 1311, all waste generated from abrasive blasting, lead-containing paints with recyclable steel or iron abrasives must be either disposed of as a hazardous waste or be stabilized with proprietary pre-blast additives . 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 is cause for immediate shutdown of the project until corrective action is taken. Store nonhazardous waste in closed containers separate from hazardous waste storage areas. Transport all hazardous waste 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. Include drawings, load-bearing capacity calculations, and wind load calculations. 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 must 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. Where required, verify the containment air pressure by instrument.

1.3.3.3 Visible Emissions Monitoring

Prepare a Visible Emissions Monitoring Plan including the provisions for halting work and correcting the containment in the event unacceptable emissions are observed. General statements must not be used; specific methods, procedures, and details are required. Measure the time of emissions in accordance with 40 CFR 60, App A, Mtd 22. Monitor visible emissions for not less than 15 minutes of every hour. Calculate visible emissions for each hour by extrapolation. Visible emissions must not extend greater than 150 feet in any direction horizontal from the containment. Visible emissions must not be observed in the area of any sensitive receptor. If such emissions occur shut down the job immediately and take corrective action. Notify the foreman whenever visible emissions exceed 40 seconds in a 1 hour period. Whenever visible emissions exceed 75 seconds in a 2 hour period notify the foreman, shut down the job, and take corrective action. If the total observed visible emissions from the containment exceeds 1 percent of the work day, shut down the job and take corrective action to prevent such an occurrence. Document each time that the work is halted due to a violation of the visible emissions criteria. Documentation must include the cause for shutdown and the corrective action taken to resolve the problem.

1.3.3.4 PM-10 Monitoring

Prepare and submit a PM-10 Monitoring Plan for monitoring emissions of particulate matter 10 microns or less in size (PM-10) in compliance with the requirements of EPA regulation 40 CFR 50.6 and this paragraph. The plan must also include provisions for halting work and correcting the containment in the event unacceptable emissions occur. Position the air monitoring equipment in accordance with 40 CFR 58, App E, Subpart (8). In addition, a minimum of two PM-10 monitors must be used at the project site, one downwind from the project and one in the area of greatest public access (e.g., playground, school yard, or homeowner's yard). When the project is in an area where there are critical receptors nearby, monitoring must be conducted throughout the entire period that abrasive blasting and cleanup operations are performed. Otherwise, perform monitoring 4 of the first 8 days and on a regular basis thereafter for a sum total of 25 percent of the time surface preparation and debris cleanup are performed. If air quality regulatory limits are not met, take corrective actions and immediately repeat air monitoring. Conduct the preproject PM-10 monitoring a minimum of 2 weeks prior to the beginning of the project and continue for a minimum of 3 days to establish background levels. Submit a PM-10 Test Report to the Contracting Officer within 48

hours, that includes:

a. Name and location of jobsite.

b. Date of monitoring.

c. Time of monitoring (i.e., time monitoring begins and ends each day).

d. Identification and serial number of monitoring units.

e. Drawing showing specific location of monitoring units.

f. Drawing showing specific location of paint removal operation and the method of removal or work activity being performed.

g. Wind direction and velocity.

h. A flow chart verifying the rate of air flow across the filter throughout the sampling period.

i. Name and address of laboratory.

j. Laboratory test procedure.

k. Laboratory test results.

l. Signatures of field and laboratory technicians conducting the work.

1.3.3.5 TSP Monitoring

Prepare a TSP Monitoring Plan for monitoring emissions of Total Suspended Particulates (TSP) in compliance with the requirements of EPA regulation 40 CFR 50.12 and this paragraph. The plan must include provisions for halting work and correcting the containment in the event unacceptable emissions occur. Position the air monitoring equipment in accordance with 40 CFR 58, App E, Subpart (8). A minimum of two TSP monitors must be used at the project site, one downwind from the project and one in the area of greatest public access (e.g. playground, school yard, or homeowner's yard). When the project is in an area where there are critical receptors nearby, TSP-lead monitoring must be conducted throughout the entire period that abrasive blasting and cleanup operations are performed. Otherwise, perform monitoring 4 of the first 8 days and on a regular basis thereafter for a sum total of 25 percent of the time surface preparation and debris cleanup are performed. If air quality regulatory limits are not met, require air monitoring to be repeated immediately after corrective actions have been taken. Also conduct preproject TSP monitoring. Conduct the preproject TSP monitoring a minimum of 2 weeks prior to the beginning of the project and continue the monitoring for a minimum of 3 days to establish background levels. Submit a TSP Test Report to the Contracting Officer within 48 hours including:

a. Name and location of jobsite.

b. Date of monitoring.

c. Time of monitoring (i.e., time monitoring begins and ends each day).

d. Identification and serial number of monitoring units.

e. Drawing showing specific location of monitoring units.

f. Drawing showing specific location of paint removal operation and the method of removal or work activity being performed.

g. Wind direction and velocity.

h. A flow chart verifying the rate of air flow across the filter throughout the sampling period.

i. Name and address of laboratory.

j. Laboratory test procedure.

k. Laboratory test results.

l. Signatures of field and laboratory technicians conducting the work.

1.3.3.6 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 must 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. Any release of lead paint debris into the waterways having a reportable quantity of hazardous substance pursuant to Section 311 of the Clean Water Act, must be reported to the EPA in accordance with 40 CFR 117 and 40 CFR 355. The plan must require the thorough documentation of any release or spill that carries into waterways or storm sewers. 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. Also report releases 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.

1.4 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

Safety, Health, and Environmental Requirements; G, DO

Accident Prevention Plan; G, DO

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

Waste Disposal Plan; G, DO

Containment Plan; G, DO

Visible Emissions Monitoring Plan; G, DO

PM-10 Monitoring Plan; G, DO

TSP Monitoring Plan; G, DO

Water Quality Plan; G, DO

SD-03 Product Data

Manufacturer's Safety Data Sheet; G, DO

SD-04 Samples

Product Samples; G, DO

SD-06 Test Reports

PM-10 Test Report

TSP Test Report

Inspection Reports

Medical Status Records

Change in Medical Status Report

Air Monitoring Test Plan; G, DO

Air Monitoring Test Report

SD-07 Certificates

Certified EHS Professional

Certified Lead Laboratory

SSPC QP 1 Certificate;

Qualified Hazardous Paint Removal Contractor; G, DO

Coating Thickness Gage Qualification

Qualified Coating Applicator; G, DO

1.5 QUALIFICATIONS

Qualifications and experience must 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 EM 385-1-1, Section 01 to develop the required safety and health submittal and to provide onsite safety and health services during the contract period. The person must be a Certified Industrial Hygienist (CIH), an Industrial Hygienist (IH), or a Certified Safety Professional (CSP) with a minimum of three 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 two 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 must have successfully completed an EPA or state accredited lead-based paint abatement Supervisor course specific to the work to be performed and 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 must 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 must 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

The Painting Contractor must be a certified SSPC QP 1 Painting Contractor. Submit a copy of the applicable SSPC QP-1 Certificate. The contractor must have been certified prior to award of this contract and must remain certified for the duration of this contract. Certifications scheduled to expire during the contract performance period must be renewed and submitted to the Contracting Officer prior to expiration.

1.5.4 Qualified Hazardous Paint Removal Contractor

The Painting Contractor must be a certified SSPC QP 2 Category B Painting Contractor for all surface preparation or coating application. Submit a copy of the applicable SSPC Certificate. The contractor must have been

certified prior to award of this contract and must remain certified for the duration of this contract. Submit all renewals if they occur during the contract performance period. Renewals must be achieved prior expirations occurring.

1.5.5 Qualified Shop Painting Contractor

The Painting Contractor must be a certified SSPC QP 3 Painting Contractor for all off-site surface preparation or coating application. Submit a copy of the applicable SSPC Certificates. The contractor must have been certified prior to award of this contract and must remain certified for the duration of this contract. Submit all renewals if they occur during the contract performance period. Renewals must be achieved prior expirations occurring.

1.5.6 Qualified Coating Applicator

Submit records of qualification tests for each Qualified Coating 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.

1.5.6.1 Certification Test Procedure

Conduct certification testing of coating applicators at the job site in coordination with the Contracting Officer. Supply the fabricated test plates to be used for the tests and provide crane service, rigging, and any other work necessary to provide accessibility for the certification testing and inspection. The test plate must be painted in a near vertical position. In preparation, clean and prepare the test plate in accordance with the requirements of the contracted work. Perform abrasive blasting with the blast media to be used in the contract. The paints to be applied are Contractor supplied materials and are those previously tested and approved for use on the contract. Paints must be applied as specified in this contract. The painter being tested must mix and thin the paints to be used in the test and set up and adjust the application equipment for use. Each painter must apply each of the types of paint comprising the specified system. The contractor's QC inspector must be present during the procedure to monitor the actions of the painter being tested.

1.5.6.2 Certification Criteria

Evaluate the paint applicator based on the conformance of the applied paint system to the requirements of this specification. Deficiencies in the coatings, improper mixing or improper application methods are basis for failure. The authorized Government Representative is the sole judge as to the acceptability of each coating applicator's performance.

1.5.7 Coating Thickness Gage Qualification

Submit Coating Thickness Gage Qualification documentation of manufacturer's certification for all coating thickness gages. Use magnetic flux thickness gages as described in ASTM D7091 to make all coating thickness measurements on ferrous metal substrates. Use eddy current thickness gages as described in ASTM D7091 to measure coating thickness on all nonferrous metal substrates. Gages to be used on the job must have an accuracy of 3 percent or better and be certified by the

manufacturer as meeting this requirement.

1.5.8 Certified Coating Inspector

Provide a certified coating inspector who is listed as either SSPC-PCI Level 2, or NACE CIP Level 2 for all surface preparation and painting activities. Submit a copy of the applicable SSPC or NACE Certificates. Submit all renewals if they occur during the contract performance period. Renewals must be achieved prior expirations occurring.

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, must be packaged in standard containers not larger than 5 gal, with removable friction or lug-type covers. Containers for vinyl-type paints must 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 must 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 must be delivered to the job in unbroken containers. Paints that can be harmed by exposure to cold weather must be stored in ventilated, heated shelters. All paints must be stored under cover from the elements and in locations free from sparks and flames.

1.7 AMBIENT CONDITIONS

Paint must be applied in accordance with the manufacturers written instructions or to the special requirements contained herein. Surfaces that are less than 5 degrees F above the dew point temperature must be monitored closely to assure that are completely free of moisture as determined by sight and touch. Paint must not be applied to surfaces upon which there is detectable frost or ice. Except as otherwise specified, paint must not be applied if the temperature of the surfaces to be painted and of air in contact therewith is less than 45 degrees F during paint application nor 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 utilizing climate control equipment (e.g. dehumidification, heaters, etc.), provided the minimum temperatures and surface dryness requirements prescribed previously are maintained. Paint must 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

2.1 PRODUCT SAMPLES

Submit product samples of each batch of thinner, solvent, and paint to the Government for testing. Submit manufacturer's Safety Data Sheet (SDS) for each type of paint used; for products that are specified to be applied in accordance with the manufacturer's recommendations, submit the paint manufacturer's product data sheet (PDS) or other written instructions for those products. Allow at least 30 days from time of delivery to the

contracting officer for testing of samples of paints and thinners. Sampling may be at the jobsite or source of supply. Coordinate sampling and submission of all samples of paint and thinner with the Contracting Officer. Standard sample size for liquid paints and thinners is 1-quart; powders and other additives for multi component paints may be of appropriately smaller size. The sample must be labeled to indicate formula or specification number and nomenclature, batch number, batch quantity, color, date made, and applicable project contract number. Testing will be performed by the Government. Costs for retesting rejected material will be deducted from payments to the Contractor at the rate of 1000 dollars for each paint sample retested and 1000 dollars for each thinner retested.

PART 3 EXECUTION

3.1 CLEANING AND PREPARATION OF SURFACES TO BE PAINTED

3.1.1 General Requirements

Clean surfaces to be painted before applying paint or surface treatments. Remove deposits of grease or oil in accordance with SSPC SP 1, prior to mechanical cleaning. Perform solvent cleaning 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. Protect machinery and electrical components against entry of blast abrasive and dust into working parts. Program cleaning and painting such that dust or other contaminants from the cleaning process do not fall on wet, newly painted surfaces. Protect surfaces not intended to be painted from the effects of cleaning and painting operations. Conduct welding of, or in the vicinity of, previously painted surfaces in a manner to prevent weld spatter from striking the paint and to otherwise reduce coating damage to a minimum. Restore any paint damaged by welding operations to original condition. Surfaces to be painted that will be inaccessible after construction, erection, or installation operations are completed must be painted before they become inaccessible.

3.1.2 Ferrous Surfaces Subject to Atmospheric Exposures

Clean ferrous surfaces that are to be continuously in exterior or interior atmospheric exposure and other surfaces as directed by means of power tools or by dry blasting to the brush-off grade. Perform cleaning and priming in the shop unless otherwise directed or permitted. Conduct power tool cleaning in conformance with the requirements of SSPC SP 3. Conduct brush-off blast cleaning in conformance with the requirements of SSPC 7/NACE No.4. Conduct commercial blast cleaning in conformance with the requirements of SSPC SP 6/NACE No.3. Clean welds and adjoining surfaces within a few inches (centimeters) 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 is required unless the latter is carried out with thoroughness to remove all soluble alkaline deposits. Limit wetting of the surfaces during water-washing operations to the weld area required to be treated, and assure that wetted areas, including any crevices, are completely 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 is removed with impact or grinding tools. Round all sharp edges including those caused by corrosion, to a minimum radius of1/16 inch to ensure adequate paint coverage. Prime all surfaces as soon as practicable after cleaning and in all cases prior to contamination or deterioration of the prepared surfaces. To the greatest degree possible, clean (and prime)all steel surfaces prior to lengthy outdoor storage.

3.1.2.1 Coated Ferrous Surfaces Subject to Atmospheric Exposures

Power tool clean coated ferrous surfaces to be overcoated in accordance with SSPC SP 3. The entire surface to be overcoated does not have to be power tool cleaned provided that all surfaces are free of all loose rust, loose paint and visible surface contaminants. Following power tool cleaning, further clean surfaces by power washing using a rotating tip and pressures of 1500 to 5000 PSI. Adjust water pressure such that all chalk is removed without significantly eroding the existing coating. After drying, spot prime all surfaces as soon as practicable and in all cases prior to contamination or deterioration of the prepared surfaces.

3.1.3 Ferrous Surfaces Subject to Severe Exposure

Dry blast-clean ferrous surfaces subject to extended periods of immersion or as otherwise required to white metal according to SSPC SP 5/NACE No. 1. The blast profile must be angular with a minimum profile height of 1.5 mils. Select appropriate abrasive size and equipment operating parameters to limit maximum surface profile on new steel to 2.5 mils and to prevent increasing existing profile height on previously blasted steel. Where an existing profile is encountered, remove representative spots of existing coating with a chemical stripper and measure and document the existing profile prior to initiating blasting operations. Measure all surface profiles in accordance with ASTM D4417, Method C. Steel shot or other abrasives that do not produce an angular profile must not be used. If recycled blast media is used, maintain an appropriate particle size distribution so that the specified profile is consistently obtained. Round all sharp edges including those caused by corrosion, to a nominal 1/16 inch radius and reblast the areas prior to painting. Remove weld spatter not dislodged by blasting with impact or grinding tools and reblast the areas prior to painting. Surfaces must be dry at the time of blasting. Conduct blast cleaning to SSPC SP 5/NACE No. 1 in the field and, unless otherwise specifically authorized, after final erection. Within 8 hours after blast cleaning, and in any case prior to the deposition of any detectable moisture, contaminants, or corrosion, clean all ferrous surfaces of dust and abrasive particles by brush, vacuum cleaner, and/or blown down with clean, dry, compressed air, and apply the first coat of paint. Authorization to extend this 8 hour coating requirement for shop application, application within dehumidified containment, or other conditions will not be granted. Upon written request by the Contractor, the Contracting Officer may authorize mill or shop cleaning of assembled or partially assembled components specified to receive one of the vinyl-type paint systems or Systems 6-A-Z and 21-A-Z employing the epoxy zinc-rich primer or Systems 23-A-Z and 23-B-Z employing SSPC Paint 40 moisture cure urethane zinc-rich primer. Shop coat all shop blasted surfaces with the first and second coats of the specified paint system. At the time field painting is initiated, apply an additional single spray coat of the zinc rich primer to the epoxy zinc-rich and moisture cure urethane primed surfaces as specified in the paint system instructions.

Maintain the shop coating in good condition by cleaning and touching up of areas damaged during the construction period. If pinpoint or general rusting appears, the defective areas must be reblasted and repainted at no added cost to the Government. Prior to the field application of subsequent coats, thoroughly clean soiled areas of the shop coating and all welds or other unpainted or damaged areas must be cleaned and coated in a manner to make them equivalent to adjacent, undamaged paint surfaces.

3.1.4 Damp and Wet Ferrous Metal Surfaces

Blast-clean ferrous surfaces that are wet with condensation or standing or running water, to white metal according to SSPC SP 5/NACE No. 1. The blast profile must be angular with a minimum profile height of 1.5 mils. Select appropriate abrasive size and equipment operating parameters to limit maximum surface profile on new steel to 2.5 mils and to prevent increasing existing profile height on previously blasted steel. Where an existing profile is encountered, remove representative spots of existing coating with a chemical stripper and measure and document the existing profile prior to initiating blasting operations. Measure all surface profiles in accordance with ASTM D4417, Method C. Steel shot or other abrasives that do not produce an angular profile are not to be used. If recycled blast media is used, maintain an appropriate particle size distribution so that the specified profile is consistently obtained. Round all sharp edges including those caused by corrosion, to a nominal 1/16 inch radius and reblast the areas prior to painting. Remove weld spatter not dislodged by blasting with impact or grinding tools and reblast the areas prior to painting. Immediately after cleaning and prior to the formation of extensive corrosion products, clean all ferrous surfaces of residual abrasive particles, and apply the first coat of paint in accordance with manufacturer's recommendations. A slightly visible rust bloom is permitted on surfaces to be painted.

3.1.5 Non-Ferrous Metal Surfaces

Abrasive blast all non-ferrous metal surfaces to be painted in accordance with SSPC SP 16 in order to roughen the surface and promote adhesion. Only non-metallic abrasives are permitted. All existing coatings must be removed and a minimum surface profile of 1.5 mils must be produced. Measure the surface profile in accordance with ASTM D4417 Method C. Prime all surfaces as soon as practicable after cleaning and in all cases prior to contamination or deterioration of the prepared surfaces.

3.2 PAINT APPLICATION

3.2.1 General

Unless otherwise specified, the finished coating must be free from holidays, pinholes, bubbles, runs, drops, ridges, waves, laps, excessive or unsightly brush marks, and variations in color, texture, and gloss. Do not initiate the application of initial or subsequent coatings until the Contracting Officer has verified that atmospheric conditions and the surfaces to be coated are satisfactory. Each paint coat must be applied in a manner that will produce an even, continuous film of uniform thickness. Provide special attention to edges, corners, crevices, seams, joints, welds, rivets, corrosion pits, and other surface irregularities to ensure that they receive an adequate thickness of paint. Spray equipment must be equipped with traps and separators and where appropriate, mechanical agitators, pressure gauges, pressure regulators, and screens or filters. Air caps, nozzles, and needles must be as recommended by the

spray equipment manufacturer for the material being applied. Airless-type spray equipment may be used only on broad, flat, or otherwise simply configured surfaces, except that it may be employed for general painting if the spray gun is equipped with dual or adjustable tips of proper types and orifice sizes. The use of airless-type equipment is not allowed for the application of vinyl paints.

3.2.2 Mixing and Thinning of Coatings other than the Vinyl Formulations

Paints must be thoroughly mixed, strained where necessary, and kept at a uniform composition and consistency during application. Incorporate dry-powder pigments specified to be added at the time of use, into the vehicle or base paint with the aid of powered stirrers, in a manner that will produce a smooth, homogeneous mixture free of lumps and dry particles. Where necessary to suit conditions of the surface temperature, weather, and method of application, the paint may be thinned immediately prior to use. Thinning, induction time and pot life must comply with the manufacturers written instructions (PDS). Bring any paint that has been stored at a temperature below the manufacturer's application temperature range up to at least 70 degrees F before being mixed and thinned. Its temperature in the spray tank or other working container must not fall below the manufacturer's specified application temperature range during the application. Any 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 must not be used and must be removed from the project site. In order to determine its suitability for application, resample and submit for testing any paint and thinner that is more than one year from the date of manufacture or last documented testing. Moisture cure urethane paint must be resampled and resubmitted for testing to determine its suitability for application whenever the paint is more than six months beyond the date of manufacture on the container or more than 6 months beyond the last documented laboratory testing.

3.2.3 Time between Surface Preparation and Painting

Surfaces that have been cleaned and/or otherwise prepared for painting must be primed as soon as practicable after such preparation has been completed but, in any event, prior to any deterioration of the prepared surface.

3.2.4 Method of Paint Application

Unless otherwise specified, paint must be applied by brush, roller, or spray to ferrous and nonferrous metal surfaces. Special attention must be directed toward ensuring adequate coverage of edges, corners, crevices, pits, rivets, bolts, welds, and similar surface irregularities. Other methods of application to metal surfaces are subject to the specific approval of the Contracting Officer. Paint on plaster, concrete, or other nonmetallic surfaces must be applied by brush, roller, and/or spray.

3.2.5 Coverage and Film Thickness

Film thickness or spreading rates must be as specified hereinafter. Where no spreading rate is specified, apply the paint at a rate consistent with the manufacturer's written instructions. In any event, the combined coats of a specified paint system must completely hide base surface and the finish coats must completely hide undercoats of dissimilar color.

3.2.6 Coating Thickness Measurement on Metal

Where dry film thickness requirements are specified for coatings on metal surfaces, make measurements with a gage qualified in accordance with paragraph Coating Thickness Gage Qualification and calibrated and used in accordance with ASTM D7091. Prior to each use, establish the Base Metal Reading (BMR) for the gage as specified in the test method. Verify the accuracy of the gage using plastic shims as specified by the test method both prior to and following each set of measurements. Perform dry film measurements on all areas of the structure being coated in accordance with SSPC PA 2 with Level 1 thickness restrictions. Perform a sufficient number of thickness measurements to ensure that every area on every member is in compliance with the requirements of this contract. Report all thickness measurements as the mean for each spot determination.

3.2.7 Progress of Painting Work

Where field painting on any type of surface has commenced, complete the entire painting operation on that portion of the work, including priming and finishing coats, as soon as practicable and without prolonged delays. Allow sufficient time between successive coats to permit them to dry properly for recoating, modifying this period as necessary to suit adverse weather conditions. Paint is 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 must be unscarred and completely integral at the time of application of succeeding coats. At the time of application of each successive coat, clean undercoats of dust, grease, overspray, or foreign matter by means of air blast, solvent cleaning, or other suitable means. Cement and mortar deposits on painted steel surfaces, not satisfactorily removed by ordinary cleaning methods, must be brush-off blast cleaned and completely repainted as required. If necessary for establishment of good adhesion, scuff sand high gloss undercoats, and, solvent wipe, or otherwise treat prior to application of a succeeding coat. Apply field coats on metal after erection except as otherwise specified and except for surfaces to be painted that will become inaccessible after erection.

3.2.8 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 must subsequently be filled or sealed with paint. Contacting metal surfaces formed by high-strength bolts in friction-type connections must not be painted. Where a nonmetal surface is to be in riveted or bolted contact with a metal surface, the contacting surfaces of the metal must be cleaned and given three coats of the specified primer. Unless otherwise specified, corrosion-resisting metal surfaces, including cladding therewith, must not be painted.

3.2.9 Drying Time Prior to Immersion

Minimum drying periods after final coat prior to immersion are: epoxy and moisture cure urethane systems at least 5 days, vinyl-type paint systems at least 3 days, and cold-applied coal tar systems at least 7 days. Increase minimum drying periods twofold if the drying temperature is below 65 degrees F and/or if the immersion exposure involves considerable

abrasion.

3.2.10 Protection of Painted Surfaces

Where shelter and/or heat are provided for painted surfaces during inclement weather, such protective measures must be maintained until the paint film has dried and discontinuance of the measures is authorized. Items that have been painted must not be handled, worked on, or otherwise disturbed until the paint coat is fully dry and hard. Store all metalwork coated in the shop or field prior to final erection 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. Damaged areas of paint on such metalwork must be cleaned and touched up without delay. Apply the first field coat of paint within a reasonable period of time after the shop coat and in any event before weathering of the shop coat becomes extensive.

3.3 PAINT SYSTEMS APPLICATION

The required paint systems and the surfaces to which they are to be applied are shown in this paragraph, and/or in the drawings. Supplementary information follows.

3.3.1 Fabricated and Assembled Items

Items that have been fabricated and/or assembled into essentially their final form and that are customarily cleaned and painted in accordance with the manufacturer's standard practice will be exempted from equivalent surface preparation and painting requirements described herein, provided that:

a. Surfaces primed (only) in accordance with such standard practices are compatible with specified field-applied finish coats.

b. Surfaces that have been primed and finish painted in accordance with the manufacturer's standard practice are of acceptable color and are capable of being satisfactorily touched up in the field.

c. Items expressly designated herein to be cleaned and painted in a specified manner are not coated in accordance with the manufacturer's standard practice if different from that specified herein.

3.3.2 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 must be accomplished in accordance with detailed requirements previously described.

3.3.3 System No. 21-A-Z

Apply the epoxy zinc-rich paint 19C in two single half-lapped spray coats to an average dry film thickness of a minimum of 3.0 mils and a thickness at any spot of not less than 2.5 mils or greater than 6.0 mils. After a drying period of not less than 6 hours or more than 96 hours, apply at least two coats of epoxy polyamide paint to produce an average dry film thickness totaling 12 mils and a thickness at any spot of not less than 10 mils. If the epoxy zinc-rich paint has been applied in the shop or otherwise has been permitted to cure for longer than 96 hours, it must be

abraded and recoated with an additional thin tack coat of the zinc-rich paint, which in turn must be overcoated within 96 hours with the first coat of the epoxy polyamide paint. Apply MIL-DTL-24441 in accordance with the manufacturer's recommendations regarding type of thinner, amount of thinning, and required induction time. The drying time between non-zinc coats must not be less than 12 hours nor more than 96 hours.

3.3.4 Protection of Nonpainted Items and Cleanup

Maintain walls, equipment, fixtures and all other items in the vicinity of the surfaces being painted free from damage by paint or painting activities. Promptly repair any paint spillage and painting activity damage.

3.4 INSPECTION

Surface preparation and painting inspections must be conducted by an inspector certified as meeting one of the following designations: SSPC-PCI Level 2, NACE-CIP Level 2. The inspector will inspect and document all work phases and operations on a daily basis and submit daily Inspection Reports. As a minimum the daily report must 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.

3.5 PAINTING SCHEDULES

SYSTEM NO. 21-A-Z			
Items or surfaces to be coated:		Pump shaft, propeller, propeller hub, diffuser, diffuser extension cone	
SURFACE PREPARATION	1st & 2nd COAT	3rd & 4th COAT	5th COAT
As specified for each type of surface	MIL-DTL-24441/19C	MIL-DTL-24441	as needed to obtain specified thickness

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 15 -

15 00 00.02 25

FISHWATER PUMP GEARBOX

PART 1 GENERAL

1.1 GENERAL INFORMATION
1.2 REFERENCES
1.3 SUBMITTALS
1.4 QUALITY ASSURANCE
1.4.1 General
1.4.2 Drawing Index
1.4.3 General Layout Drawings
1.4.4 Detail Drawings
1.4.5 Design Calculations
1.4.6 Product Data
1.4.7 Supervision
1.4.8 Contractor's Reports
1.4.9 Standard Products
1.4.10 Verification of Dimensions
1.4.11 Lube System Piping Arrangement
1.4.12 Manufacturer and Assembler
1.5 DELIVERY, STORAGE, AND HANDLING
1.5.1 Delivery, Storage and Handling of Equipment
1.5.1.1 Packaging
1.5.1.2 Shipping, Preservation, and Storage

PART 2 PRODUCTS

2.1 GENERAL
2.2 EQUIPMENT
2.2.1 Machinery
2.2.2 Nameplate
2.2.3 Equipment Submittal Data
2.2.3.1 Gearbox
2.2.3.2 Couplings (High and Low Speed Shafts)
2.2.3.3 Pillow Block, Greaseless, and Sleeve Bearings
2.3 DESIGN CRITERIA
2.3.1 EXISTING GEARBOX DATA
2.3.2 NEW GEARBOX DATA
2.4 GEARBOX
2.4.1 General
2.4.2 Gearing
2.4.3 Bearings
2.4.4 Seals
2.4.5 Fasteners
2.4.6 Breather
2.4.7 Lubrication
2.4.8 Dynamic Balancing
2.5 THRUST BEARING

2.6 PUMP SHAFT BEARINGS
2.6.1 Self-Lubricated Bearings
2.7 MAIN AND THRUST BEARING LUBE SYSTEM
2.7.1 Oil Pumps
2.7.2 Oil Pump Motors
2.7.3 Oil Pump Couplings
2.7.4 Oil Filters
2.7.5 Oil Cooler
2.7.6 Pressure Relief Valves, Switches, Gauges, Flow Indication and Temperature Sensors and Relays
2.8 PIPE AND FITTINGS
2.8.1 Steel Pipe
2.8.2 Copper Pipe
2.8.3 Pipe Fittings
2.8.4 Flanged Joints
2.8.5 Threaded Joints
2.8.6 Solder Joints for Copper Tube
2.9 LUBRICATION
2.9.1 Main Lube Oil System
2.9.2 Thrust Bearing Lube Oil
2.10 SHAFT COUPLINGS
2.10.1 General
2.10.1.1 Gear Type Couplings
2.11 KEYS AND KEYSEATS
2.12 PAINTING

PART 3 EXECUTION

3.1 METAL FABRICATION
3.1.1 General
3.1.2 Material
3.1.3 Dimensional Tolerances for Structural Work
3.2 MACHINE WORK
3.2.1 Finished Surfaces
3.2.2 Unfinished Surfaces
3.2.3 Pin Holes
3.3 NONDESTRUCTIVE EXAMINATION
3.3.1 NDT Agency Requirements
3.3.2 Gear Nondestructive Testing Examination
3.3.2.1 Gear Teeth (Magnetic Particle or Dye Penetrant)
3.3.2.2 Gear Spokes and Hub (Dye Penetrant)
3.3.3 Forgings and Weldments
3.4 GEAR CERTIFICATION
3.5 WELDING
3.6 MISCELLANEOUS PROVISIONS
3.6.1 Cleaning of Corrosion-Resisting Steel
3.6.2 Lubrication
3.7 SHOP ASSEMBLY AND TESTS
3.7.1 General
3.7.2 Alignment
3.7.3 Anti-Seize Lubricant
3.7.4 Acceptance
3.7.5 Gages
3.8 FIELD ERECTION AND TESTS
3.9 EQUIPMENT WARRANTY
3.10 OPERATIONS AND MAINTENANCE DATA

-- End of Section Table of Contents --

15 00 00.02 25

FISHWATER PUMP GEARBOX

PART 1 GENERAL

1.1 GENERAL INFORMATION

a. This Section covers the mechanical work to furnish, install, and align one new fishwater pump gearbox. The new fishwater pump gearbox will replace the existing fishwater pump gearbox installed on fishwater pump Unit 2 with serial number 129037. Optional work to Unit 1 (SN 63678) and Unit 3 (SN 155704) is identical. References to gearbox in this Specification Section are understood to refer to the new fishwater pump gearbox, unless stated otherwise.

b. The work scope for gearbox replacement includes the following:

(1) Furnish and install one right angle drive fishwater pump gearbox as specified, with the final service factor and horsepower rating being equal or greater than the specified values, unless otherwise approved. Gearbox must include all new rotating elements including gearing, gear hubs, shafting, couplings, rotating element bearings, as well as seals, gaskets, thrust bearing assembly and miscellaneous mechanical parts and materials. Gearbox bearings must be rated for an L10 life of 200,000 hours. Gearbox must include a new self-contained main lubricating oil system and a new thrust bearing lubricating system.

(2) Paint housing with OEM approved coatings that are compatible with new lubricating oil.

(3) Perform final inspection and factory test prior to shipping new gearbox to John Day Dam for installation.

(4) Perform gearbox lubricating oil analysis prior to shipping. Contaminated lubricating oil must be removed from the gearbox, the gearbox cleaned to remove all abrasives and other contaminants, and replaced with new lubricating oil at the Contractor's expense. The new lubricating oil must be retested at the Contractor's expense. Removal, testing and disposal of lubricating oil must be performed in accordance with municipality requirements.

(5) Provide new Operation and Maintenance (O&M) manuals and general layout drawings for the refurbished gearbox. The new O&M manuals and drawings must reflect all details of existing and upgraded components.

(6) Provide spare parts listed in 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.

AMERICAN GEAR MANUFACTURERS ASSOCIATION (AGMA)

AGMA 908	(1989B; R 1999) Information Sheet: Geometry Factors for Determining the Pitting Resistance and Bending Strength of Spur, Helical and Herringbone Gear Teeth
AGMA 2000-A88	(1992) Gear Classification and Inspection Handbook Tolerances and Measuring Methods for Unassembled Spur and Helical Gears (Including Metric Equivalents)
AGMA 9002	(2014C) Bores and Keyways for Flexible Couplings (Inch Series)
ANSI/AGMA 2009	(2001B; R 2008) Bevel Gear Classification, Tolerances, and Inspection Methods

AMERICAN SOCIETY FOR NONDESTRUCTIVE TESTING (ASNT)

ASNT SNT-TC-1A	(2020) Recommended Practice for Personnel Qualification and Certification in Nondestructive Testing
ABMA 19.1	(2011; R 2024) Tapered Roller Bearings - Radial Metric Design
ABMA 19.2	(2013) Tapered Roller Bearings - Radial Inch Design
ABMA 20	(2025) Radial Bearings of Ball, Cylindrical CRoller and Spherical Roller Types - Metric Design
ABMA 8.2	(2023) Rolling Element Bearings - Shaft Mounted - Locknuts, Sleeves, and Locking Devices - Inch Design

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME B1.20.1	(2013; R 2018) Pipe Threads, General Purpose (Inch)
ASME B16.5	(2020) Pipe Flanges and Flanged Fittings NPS 1/2 Through NPS 24 Metric/Inch Standard
ASME B16.9	(2024) Factory-Made Wrought Buttwelding Fittings
ASME B16.18	(2021) Cast Copper Alloy Solder Joint Pressure Fittings
ASME B16.22	(2021) Wrought Copper and Copper Alloy Solder Joint Pressure Fittings
ASME B17.1	(1967; R 2017) Keys and Keyseats

ASME B18.2.1	(2012; R 2021) Square, Hex, Heavy Hex, and Askew Head Bolts and Hex, Heavy Hex, Hex Flange, Lobed Head, and Lag Screws (Inch Series)
ASME B18.2.2	(2022) Nuts for General Applications: Machine Screw Nuts, and Hex, Square, Hex Flange, and Coupling Nuts (Inch Series)
ASME B18.21.1	(2009; R 2016) Washers: Helical Spring-Lock, Tooth Lock, and Plain Washers (Inch Series)
ASME B18.22.1	(1965; R 2003; R 2008) Plain Washers - Reaffirmation and Redesignation of ASA B27.2 - 1965(Inch Series)
ASME B46.1	(2020) Surface Texture, Surface Roughness, Waviness and Lay

AMERICAN WELDING SOCIETY (AWS)

AWS D1.1/D1.1M	(2025) Structural Welding Code - Steel

ASTM INTERNATIONAL (ASTM)

ASTM A53/A53M	(2024) Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
ASTM A181/A181M	(2023) Standard Specification for Carbon Steel Forgings, for General-Purpose Piping
ASTM A380/A380M	(2025) Standard Practice for Cleaning, Descaling, and Passivation of Stainless Steel Parts, Equipment, and Systems
ASTM B88	(2022) Standard Specification for Seamless Copper Water Tube
ASTM D3951	(2018) Commercial Packaging
ASTM E165/E165M	(2023) Standard Practice for Liquid Penetrant Examination for General Industry
ASTM E709	(2021) Standard Guide for Magnetic Particle Testing

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)

ISO 10360-2	(2009) Geometrical Product Specifications (GPS) — Acceptance and Reverification Tests for Coordinate Measuring Machines (CMM) — Part 2: CMMs Used for Measuring Linear Dimensions

MANUFACTURERS STANDARDIZATION SOCIETY OF THE VALVE AND FITTINGS INDUSTRY (MSS)

MSS SP-25	(2018) Standard Marking System for Valves, Fittings, Flanges and Unions
MSS SP-44	(2019) Steel Pipeline Flanges

1.3 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" 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

Installation And Alignment Procedure; G

SD-02 Shop Drawings

Shipping Bills

Shop Drawings

General Layout Drawings

Detail Drawings

SD-03 Product Data

Manufacturer's Literature and Equipment Data; G, DO

Lubricating Oil for Gearbox

SD-05 Design Data

Calculations

SD-06 Test Reports

Gear Inspection Log

Shop Assembly and Tests

SD-07 Certificates

Equipment Manufacturer's and Fabricator's Qualifications

Equipment Warranty

Nondestructive Examination Certification

Gear Certification

Work Supervisor Qualifications; G, DO

SD-08 Manufacturer's Instructions

Cleaning of Corrosion-Resisting Steel; G, DO

SD-10 Operation and Maintenance Data

Operations and Maintenance (O&M) Manual; G, DO

1.4 QUALITY ASSURANCE

1.4.1 General

Submit all Calculations and drawings provided as part of this Contract for approval. Product data for furnished materials and equipment must be submitted for approval. All computations and drawings submitted must be stamped and signed by a registered professional engineer who has done the design or supervised and reviewed work if performed by other engineers.

1.4.2 Drawing Index

Submit a drawing index for all drawings related to the new gearbox. The information provided in the index must include drawing numbers, revisions and titles for each manufacturer drawing listed. The index must also be inserted as an appendix to the new Operation and Maintenance manuals.

1.4.3 General Layout Drawings

Submit General Layout Drawings for new gearbox. General layout drawings must include all details related to gearbox upgrade (as applicable), and must include the general assembly views of all components internal to the gearbox with each part item number referenced to a bill of materials listing that will be included on the drawing. Bill of materials must include listing of part item numbers, quantity required, part name, material spec, and individual part number. Drawings must be submitted in accordance with Section 01 33 00, SUBMITTAL PROCEDURES. A set of 11- by 17-inch final approved versions of the general layout drawings must also be inserted as an appendix to the new Operation and Maintenance manuals.

1.4.4 Detail Drawings

Detail drawings must include assembly views as well as individual part drawings for internal drive components such as gearing, shafts, bearing cartridge assemblies, etc. Provide detail fabrication drawings for the gearbox housing assembly. Detail drawings for individual components must reference an assembly drawing of the entire gearbox which shows clearances where pertinent and the arrangement of the complete gearbox assembly. When detailed drawings are submitted, they must be submitted with arrangement drawings and bill of materials/parts lists. Bill of materials or parts lists must be included on the drawings, consisting of total quantity, part number, and weight of item or equipment. Drawings must be submitted in accordance with Section 01 33 00, SUBMITTAL PROCEDURES.

1.4.5 Design Calculations

All calculations must include a list of assumptions made, a list of all codes and standards referenced, equations, specified efficiencies, limits, factors of safety, component ratings, sources of values used, free body diagrams, or sketches of each load case. When Finite Element Modeling (FEM) data is submitted, it must be accompanied by sample written

calculations that support the FEM analysis. Post-processing FEM data, such as graphics output, submitted alone will not be accepted.

1.4.6 Product Data

a. Product data for furnished materials and equipment must be submitted for approval. Materials and equipment must be the standard products of a manufacturer regularly engaged in the manufacture of the products.

b. Submit complete descriptive literature and specifications of each product or system of products provided for a complete gearbox, including but not being limited to the items listed in the submittal article. Product data literature must include original, legible manufacturer's cut sheets and data sheets to clearly indicate physical construction, operation, mechanical characteristics and associated hardware, as applicable. Include manufacturer's catalog numbers and designations, and clearly cross-reference with shop drawings as appropriate. Product data submitted must clearly show conformance with these specifications, including, but not being limited to, product manufacturers' declarations of conformance to applicable technical standards.

1.4.7 Supervision

Provide an on-site work supervisor(s) that is familiar with the type of equipment involved, to direct the disassembly, inspection, repair, reassembly, pre and post testing, final inspections, and checks of the gearbox unit as specified. The work supervisor must be a factory certified commissioning technician with a minimum of five years of experience with the assembly, alignment, and disassembly of vertical propeller pumps and right angle gear drive units. Submit work supervisor qualifications for approval All work on the unit must be performed by skilled craftsmen that are familiar with the type of work and the equipment involved.

1.4.8 Contractor's Reports

Whenever written records of examinations, measurements, tests, checks, etc. are recorded, a copy of each must be kept in a separate file in the Contractor’s shop office for access and examination by the Government. Copies of record, which are required for submittal, must be included as well as those not requiring submittal. The Government must be notified in writing of all investigations and inspections that will take place.

1.4.9 Standard Products

Materials and equipment must be the standard products of a manufacturer regularly engaged in the manufacture of the products. Gearbox manufacturer must have been regularly engaged in the manufacture of right angle drive units for at least 10 years prior to Contract award. Manufacturers of other components must have been regularly engaged in the manufacture of those components for at least five years prior to Contract award.

1.4.10 Verification of Dimensions

The Contractor must become familiar with details of the work, verify dimensions at the shop and on-site, and advise the Contracting Officer (CO) of any discrepancy before performing any work.

1.4.11 Lube System Piping Arrangement

Connections to the piping system and all fixtures and equipment must meet the requirements specified here in. All equipment must be properly installed, completely interconnected, and placed in working order prior to shipping the new fishwater pump gearbox to John Day Lock and Dam.

1.4.12 Manufacturer and Assembler

Notify the Government immediately if changes to the dimensions shown on the drawings for the Gearbox and Fishwater Pump components (including structural supports) are required for installing the new fishwater pump gearbox. Submit Equipment Manufacturer's and Fabricator's Qualifications showing evidence and years of experience for each of the equipment manufacturers and fabricators. Identify any certifications, standards, and/or professional organizations the manufacturers comply with or are members of.

1.5 DELIVERY, STORAGE, AND HANDLING

1.5.1 Delivery, Storage and Handling of Equipment

Protect equipment and components from corrosion, deformation, and other types of damage. Store items in enclosed and secured areas free from contact with soil. Provide moisture proof weather protection for all equipment stored in outdoor locations. Transport, handle and store all equipment in accordance with the manufacturer's written instructions. Remove and replace damaged items with new items. Ship each subassembly completely assembled. Submit the Shipping Bills with the delivery of finished pieces to the site. The major pieces of equipment and subassemblies for this Contract are defined to include the following:

a. One Fishwater Pump Gearbox

b. One Gearbox Lube System

c. One Pump Shaft

d. Two Pump Shaft Bearings

1.5.1.1 Packaging

Provide equipment and subassemblies with adequate protective pads, supports, and blocking. Securely restrain equipment and subassemblies to prevent distortion or damage to the painted surfaces in transit. Any loss or damage during shipment, including damage to the painted surfaces, is the responsibility of the Contractor. Replace or repair lost or damaged items without cost to the Government. Coat all parts with a rust preventative, wrap in heavy-duty plastic, and securely contain in wooden crates. Clearly mark each crate with its contents (including Contract number and Corps mark number) on the outside, with a non-ferrous metal tag, engraved with the contents, and secured to the crate with non-ferrous screws. Provide a means for inspection of the crate's contents without destroying the crate. Pack all accessories and spare parts separately in containers plainly marked "ACCESSORIES ONLY," or "SPARE PARTS ONLY." Package each spare part or spare part assembly in a durable treated wooden crate with metallic, plastic or suitable outer shell for weathertight protection and with provisions for handling and long-term storage (60

months). Provide and deliver the component and assembly spare parts as delineated on the drawings. Place a separate packing list, listing the contents of each crate, in a moisture-proof envelope securely fastened to the outside of the crate. Standard commercial packaging in accordance with ASTM D3951 is acceptable except where a different method or standard of packaging is specified.

1.5.1.2 Shipping, Preservation, and Storage

Provide all packing, crating, e.g., necessary to ensure safe shipment of equipment. The crates become the property of the Government unless specifically waived. Fill or protect the equipment with the necessary fluids, coatings, and/or preservatives to maintain in a stable condition without corrosion, deterioration, or degradation for an extended period of storage of up to 12 months. Protect stored equipment from the weather, humidity, temperature variation, dirt and dust, or other contaminants.

PART 2 PRODUCTS

2.1 GENERAL

Materials and equipment must be the products of manufacturers regularly engaged in the manufacture of such products. Materials differing in minor respect from that specified may be proposed, provided such differences are clearly stated. Any materials required which are not covered in these specifications must conform to applicable Federal Specifications, grade or class required; or the American Society for Testing Materials; or the American National Standards Institute; or the American Society of Mechanical Engineers; or the American Gear Manufacturers Association; or American Water Works Association. In cases where material is not covered by one of the listed specification groups, furnish the highest commercial grade of material or product available. Fittings, flanges, unions and valves must be marked in accordance with a standard practice of identification of valves, fittings, flanges and unions, such as the "MSS Marking System No. SP-25" (MSS SP-25). Particular attention must be given to the marking of valves to indicate body and trim material and pressure rating.

2.2 EQUIPMENT

2.2.1 Machinery

Furnish and install equipment under this specification consisting of one fishwater pump gearbox unit. A fishwater pump gearbox unit includees base supports, gearbox housing, gear and gear drive components, anti-friction bearings, pillow block bearings, couplings, anti-rotation device, thrust bearings, and main and thrust bearing lube system and other necessary items to provide a complete and operable system.

2.2.2 Nameplate

Provide an engraved or raised metallic nameplate that is mechanically attached to each piece of equipment in a location that will be clearly visible when equipment is installed on-site. Include the manufacturer's name, model designation, serial number, unit rating, application factor, reduction ratio's, and any other applicable information on the nameplate.

2.2.3 Equipment Submittal Data

a. Submit Shop Drawings and Manufacturer's Literature and Equipment Data within 60 days of receiving Notice to Proceed.

b. Submit Shop Drawings for gears, shafts, and any other shop fabricated items, equipment dimensional drawings, assembly drawings, catalog cuts, and material data and shop drawings showing arrangement, construction details and ratings for factory built machinery; test rig assembly details; proposed and final shop test procedures and data sheets; proposed and final field operating test procedures and data sheets, for approval. Shop Drawings must include a Drawing Index, General Layout Drawings, Detail Drawings, relevant Design calculations, and relevant Product Data as described here and in subpart QUALITY ASSURANCE of this specification section. Provide all details of fabrication and assembly to include shipping and long term storage instructions. Shop drawings lacking this information will be rejected. The Government requires 30 days for review of Shop Drawings. Approval of the material submitted in no way relieves the Contractor from the responsibility of complying with the requirements of the specifications as to the suitability and quality of materials and workmanship and the adequacy of capacity, operating speed and other essential characteristics of the drives. Submit drawings, catalogs, and design data necessary to clearly show the details of any changes proposed in conformity with the requirements of this specification. Equipment, materials, and articles of construction installed or used without such approval will be at the risk of subsequent rejection.

c. Submit Manufacturer's Literature and Equipment Data for approval. Provide catalog cuts and material data for the proposed equipment that clearly indicates compliance with the requirements of these specifications and the drawings. Submit AGMA ratings for gear quality of all gears and gear reducers. Include the names of the manufacturers of all machinery and other equipment contemplated for incorporation into the work, performance capacities and other pertinent information about the equipment. Include the following Manufacturer's Literature and Equipment Data:

2.2.3.1 Gearbox

Manufacturer's Name
Type
Model Number
Exact Ratio
Efficiency

Mechanical Rating - Durability - HP, Specify SAC
Mechanical Rating - Strength - HP, Specify SAT
Rating Calculations per applicable AGMA Standard
Life Factors CL, KL
Reliability Factors CF, KR
Type of Gearing and Heat-Treatment
Type of Bearings
Minimum L-10 Bearing Life
Method of Lubrication
Size and Number of Mounting Bolts
Weight and Air Volume of Unit without Oil
Weight and Air Volume of Unit with Oil
Outline Dimensional Print
Keys and Keyway Dimensions
Type of Breather
Quantity Being Furnished
AGMA and ISO Lubrication Oil/Viscosity rating

Type of Lubricant

2.2.3.2 Couplings (High and Low Speed Shafts)

Manufacturer's Name
Type
Model Number
Bore Sizes and Tolerances
Number of Keyways
Keyway Sizes and Tolerance
Recommended Shaft Size and Tolerance
Recommended Key Size and Tolerance
Recommended Key Material
Keyways Filleted - Yes
Materials of Construction
Catalog Rating - Torque, HP/100 RPM
Service Factor Based on Catalog Rating
Angular Misalignment
Parallel Offset Misalignment
Axial Movement
Torque and HP/100 RPM Capacity of Low Speed Coupling with Anticipated Shaft Fits
Type of Lubrication

Assembly Procedure of Hub with Shaft
Weight
Outline Dimensions Print
Quantity Being Furnished

2.2.3.3 Pillow Block, Greaseless, and Sleeve Bearings

Manufacturer's Name
Type
Model Number and Size
Bearing Housing Material
Sleeve Bearing Material/Grade
Coefficient of Friction
Composite Thickness (Greaseless Composites)
Percentage Water/Oil Swell (Greaseless Composites)
Coefficient of Thermal Expansion
Crush Strength (Greaseless Composites)
Bearing Bore Diameter
Bearing Bore
Type of Bearing
Static Capacity of Bearing
Thrust Capacity of Bearing
Basic Dynamic Capacity of Bearing
Load Capacity of Bearing
L-10 Life of Bearing
Type of Seals
Type of Lubrication

Grease Grooves Included
Weight
Independent Laboratory Test Results (Greaseless Composites)
Outline Dimensional Print
Quantity Being Furnished

2.3 DESIGN CRITERIA

2.3.1 EXISTING GEARBOX DATA

Model 3532-SBVHX
Serial Number: 129037 (1981 spare gearbox)
Manufacturer: Philadelphia Gear Corporation
Input RPM: 525
Output RPM: 75
Ratio: 7:1
Service Factor: 2.0
Horsepower: 1050
Oil: Gearbox oil is Mobil SHC 220; Thrust bearing oil is Mobil DTE Medium.

2.3.2 NEW GEARBOX DATA

Input RPM: 525
Output RPM: 75
Ratio: 7:1
Service Factor: 2.0 (or greater unless otherwise approved)
Horsepower: 1050

2.4 GEARBOX

2.4.1 General

a. New gears and gear drive components must be designed in accordance with the rating methods, procedures and requirements defined in the applicable AGMA standard (AGMA 2000-A88, AGMA 2001, AGMA 2003, AGMA 2005-D03 and AGMA 2009) and these specifications, unless otherwise approved. Reference paragraph NEW GEARBOX DATA for minimum gearbox rating requirements. Submit certification listing the new gearbox horsepower and service factor rating.

b. New gearbox must be horizontal input to vertical-down output. The horizontal input must mate with the existing fishwater turbine output shaft.

c. New gearbox must mount to the existing gearbox supports or be provided with an adapter rated for the load and operating environment.

d. New gearbox must be complete with self contained main and thrust bearing lube systems.

e. All gearbox bearings must be designed for 200,000 hours minimum L-10 life under transmitted load.

f. New gearbox must include water cooled heat exchanger compatible with existing water supply. The existing gearbox water cooled heat exchanger requires approximately 25-30 gpm of 75 degrees F water at 35 psi via 1" tap. Provide any additional filtration equipment to support the exchanger installation as required by the heat exchanger manufacturer.

g. New gearbox must include a port for draining and sampling oil. Drain ports must consist of a quarter-turn lockable ball valve in line with a pipe plug. Coordinate fitting size and style with John Day Lock and Dam Project personnel. Drain valves must be located for easy access by maintenance personnel with room for sampling containers in their final installed position. Adjacent features must not interfere with drain operation.

h. New gearbox must include visual inspection windows for all gears. Provide an inspection window at each gear mesh. Windows must be positioned to allow for condition assessment of meshed gears during operation.

i. New gearbox must include sealable inspection ports suitable for insertion of a fully articulating borescope. Provide a sufficient number of inspection ports and locate them such that each internal gearbox component may be fully examined via borescope.

2.4.2 Gearing

Provide new hard cut spiral bevel gearing, carburized and ground helical gearing.

a. New gearing must be designed to withstand the transmitted loads and have a minimum AGMA Quality Number 10.

b. Welding processes must meet requirements as specified in Section 05 50 14.00 25 METAL FABRICATIONS.

c. Gears to be pressed or shrunk on a shaft must be provided with standard rectangular keys.

d. Hardness measurements for each finished gear must be recorded at a number of locations (four quadrants minimum) around the circumference to show that the gear is at or above the hardness rating used in the computations. The AGMA Quality Number must be evaluated in accordance with AGMA 2000-A88 and ANSI/AGMA 2009. Submit gear hardness readings and AGMA gear quality documentation, for all gearing, within 10 calendar days following the completion of the measurements

2.4.3 Bearings

Provide anti-friction bearings of standard types most suitable for the respective application. Bearings must have both inner and outer races. Roller bearings must conform to the applicable requirements of ABMA 19.1, ABMA 19.2 and ABMA 20. The manufacturer's published ratings must be used in determining the bearing capacity. Bearing fits must be as recommended by the manufacturer for the application. Fixed bearings must be secured against a shaft shoulder by means of a locknut and bearing lockwasher as

described in ABMA 8.2. Floating bearings must be secured against a shaft shoulder by means of a retaining ring or locknut and lockwasher. Seals must be synthetic rubber type with spring loaded lip to retain oil lubricant and exclude foreign matter. Reference paragraph GEARBOX, GENERAL (e), for bearing life requirements.

2.4.4 Seals

Provide spring loaded grease-purged dual lip seals for all shaft extensions. Design and size all seals to withstand the pressure head developed when the gearbox is completely filled with oil (storage condition) without leaking.

2.4.5 Fasteners

Threaded bolts must conform to the requirements ASME B18.2.1. Threaded nuts must conform to ASME B18.2.2. Lock and plain washers must conform respectively to ASME B18.21.1 and ASME B18.22.1.

2.4.6 Breather

Provide all reducers with a hygroscopic breather with threaded fittings for installation to prevent problems caused by moisture and particulate matter contamination in the reducer when it breathes in and out due to temperature fluctuations. Provide a breather rated to filter particles down to 3 microns in size which includes a hygroscopic agent indicator which changes color signifying when the unit requires replacement, i.e., when the desiccant is saturated with moisture. Air flow stoppage through the breather under freezing conditions is not allowed.

2.4.7 Lubrication

Provide lubricating oil for gearbox which has good resistance to foaming under normal operation at the input speed in NEW GEARBOX DATA. The lubricating oil must be noncorrosive to gearbox components. Provide the oil in accordance with the gearbox manufacturer's requirements unless otherwise specified herein. Submit lubricant characteristics, physical properties and product data. Provide lubricant suitable for continuous duty operation of the gearbox with an ambient temperature range from 32 degrees F to 110 degrees F. Lubricate couplings and bearings in accordance with the manufacturer's instructions.

2.4.8 Dynamic Balancing

a. Perform dynamic balancing of the gear assemblies prior to shipment for installation at John Day Lock and Dam.

(1) Record initial dynamic balance analysis data, including vibration velocity and vibration displacement, at rated input rpm for the gearbox and also at 1.25 times the rated input rpm. Identify and quantify unbalance and make corrections as necessary.

(2) The gears must be balanced to a quality of G 2.5 in accordance with ISO 1940 after all machining and assembly has been completed. Weights, if needed, must be welded in place.

(3) Record final dynamic balance analysis data, including vibration velocity and vibration displacement, at rated input rpm for the gearbox and also at 1.25 times the rated input rpm.

b. Submit a Dynamic Balancing Report

2.5 THRUST BEARING

Provide a new thrust bearing assembly of the same design as existing. The new assembly must be of the self equalizing shoe type and suitable for 85,000 pounds down thrust.

2.6 PUMP SHAFT BEARINGS

2.6.1 Self-Lubricated Bearings

Conform self-lubricated and composite type bearings to the requirements of Section 35 05 40.17 25 SELF-LUBRICATED MATERIALS, FABRICATION, HANDLING, AND ASSEMBLY.

2.7 MAIN AND THRUST BEARING LUBE SYSTEM

Furnish and install new main and thrust bearing lubrication systems with in-line duplex filter elements and visual indicator for oil levels. Visual indicator must include high, normal, and low oil level markings.

2.7.1 Oil Pumps

The oil pumps must be self priming, positive constant displacement rotary screw-type. Pump casing must be constructed of cast steel. Rotor housing must be cast steel and replaceable. Power rotor must be alloy steel, nitride hardened and ground. Idle rotors must be pearlitic gray iron or alloy steel hardened and ground. Gaskets must be non-asbestos fiber. Drive mechanical seal must be internal Buna-N bellows friction type, other seals must be Buna-N O-rings. Bearings must be standard external permanently grease packed deep groove ball bearings.

2.7.2 Oil Pump Motors

a. Oil pump motors must meet applicable requirements of NEMA MG 1. Each motor must have encapsulated windings and TEFC enclosures and continuous ratings. Each motor must be of sufficient size for the particular applications and must not exceed its nameplate full load rating when operating at the specified capacity under the most severe conditions described in the applicable portions of these specifications. Motor protective devices must meet the requirements of NEMA ICS. The motors must be squirrel-cage, general-purpose, 3-phase, 460 volt, 1750 RPM, 60 Hz, suitable for full-voltage starting and operation from a nominal 480-volt power source. Operating characteristics must conform to NEMA design "B." The motors must have a service factor in accordance with NEMA MG 1-12.47 A and Class B insulation with 90 degrees C or Class F insulation with 115 degrees C winding temperature rise by resistance at service load in accordance with NEMA MG 1-12.42. The insulation must be treated to make it moisture-resistant unless such properties are inherent in the insulation and process used. Suitable lifting eyebolts must be provided for all motors, as applicable. A terminal box must be furnished and rigidly attached to the frame of each motor for all required connections between motor leads and line leads. The terminal boxes must be of cast construction and must have suitable gasketed covers and threaded conduit entrances.

b. The main lube system oil pump motor must be rated for five horsepower at 1750 rpm.

c. The thrust bearing lube oil pump motor must be rated for one horsepower at 1750 rpm.

2.7.3 Oil Pump Couplings

Oil pump couplings must be flex/flex type, capable of developing the full strength of the shafting with which they connect and must be keyed thereon. In determining the coupling capacity, the manufacturer's published rating must be divided by a service factor of 1.5, or factor recommended by manufacturer, whichever is greater. Motor and pump shafts must extend all the way through the coupling halves. Rigid plate coupling guards must be provided for all couplings. Application of couplings must be in accordance with manufacturers recommended practice unless otherwise noted herein

2.7.4 Oil Filters

a. The main lube system oil filters must be duplex type designed for gear lubricating oil application, suitable for flows specified by the gearbox manufacturer, and capable of solid particle removal down to 20 microns. Viton seals must be used.

b. The thrust bearing lube system oil filters must be suitable for flows typical to the thrust bearing lube system application and rated for at least twice the rated system pressure. The filters must be rated at 10 micron absolute

2.7.5 Oil Cooler

The main lube system oil must be cooled by water at 25 - 30 gallons per minute nominal at 75 degrees F. The heat exchanger must be shell and tube design. Tubes must be straight seamless copper designed for 150 psi maximum working pressure at 300 degrees F, and roller expanded into tube sheets for permanently tight leak proof fit. The shell must be welded steel construction with bolt-on cast iron bonnets, or equal, and designed for 300 psi maximum working pressure at 300 degrees F. The oil cooler must functionally equivalent as the existing oil cooler installed with gearbox 155704 on Fish Pump Unit No. 3. The oil cooler must be constructed of materials and designed with ratings equal or better than the existing oil cooler installed on Fish Pump Unit No. 3.

2.7.6 Pressure Relief Valves, Switches, Gauges, Flow Indication and Temperature Sensors and Relays

a. Pressure relief valves, switches, and flow indication for the main and thrust bearing lube systems must be constructed of materials and designed with ratings suited to the application. Temperature sensors and relays for the thrust bearing, thrust bearing lube oil and main lube oil system must be constructed of materials and designed with ratings suited to the application. Switches must be provided with adjustable set points, and must have 125 VDC contacts, unless otherwise specified. Temperature sensor relay range of operation must be same as used on original design for existing fishwater pump gearbox

b. Gauges must be equipped with shutoff cock and snubber, conforming to ASME B40.100, and must be calibrated in pounds per square inch (psi)

in no more than 2 psi increments. Gauge ranges must be appropriate for the pressure range of the system as recommended by the equipment manufacturer. Gauges must include low pressure and high pressure indication marks. Normal operating pressures must be indicated near the mid-point range of the gauges. Gauge dials must be a minimum 4-1/2 inches in diameter.

2.8 PIPE AND FITTINGS

The gearbox manufacturer drawings must show the general schematic of the lube oil piping for the main and thrust bearing lube systems.

2.8.1 Steel Pipe

Gearbox external lubricating oil pipe must be Schedule 80 seamless black steel conforming to ASTM A53/A53M, Type E or S, unless otherwise noted.

2.8.2 Copper Pipe

Gearbox internal lubricating oil pipe must be ASTM B88 Type K seamless copper tubing.

2.8.3 Pipe Fittings

a. Fittings for steel pipe must be black steel welding type conforming to ASME B16.9. Flanges must be the forged steel welding type conforming to ASME B16.5 and ASTM A181/A181M, as applicable. All fittings must meet or exceed the pressure rating and/or wall thickness of the line in which they are installed. Branch connection fittings must be specifically designed to be welded into steel lines and must be in conformity with the appropriate ANSI standards.

b. Fittings for copper pipe must be wrought copper solder joint ASME B16.22
or cast brass solder joint ASME B16.18.

2.8.4 Flanged Joints

Flanges must meet MSS SP-44 and be suitable for the required operating pressure and temperature conditions. Flange gaskets must be constructed of materials suitable for the lube oil system. Flanges for steel pipe must be welded. Threaded flanges will not be permitted. Joints must be brought up tight using the full number of hex-head machine bolts and hex nuts. Gaskets must be the ring type. Gasket material must be 1/16-inch minimum thickness.

2.8.5 Threaded Joints

Threaded joints must have pipe threads conforming to ASME B1.20.1. Screwed threads must be made up with lubrication applied on the male threads only. Caulking of screwed joints to stop or prevent leakage will not be permitted. Joints must be made with Teflon tape. The exposed threads on ferrous pipe must be coated with zinc.

2.8.6 Solder Joints for Copper Tube

All tubing joints must be soldered with an approved procedure, using solder and flux conforming to ASTM B 32. Solder must be Type Sn96 (96 percent

tin - 4 percent silver) or Type Sb5 (95 percent tin - 5 percent antimony); flux must be Type ON or OS (non acid), unless otherwise approved. In making soldered joints, the ends of the tube must be cut square, with all burrs removed and the ends thoroughly cleaned with emery or steel wool for a distance equal to the length of the fitting socket. Tubing and fittings must be clean and bright with no dark spots. The tubing must be firmly seated in the fitting socket, which must be rotated several times to ensure even distribution of the flux. Fittings must be preheated, and then evenly heated while solder is fed into the joint until it appears around the end of the fitting at the tubing circumference. Care must be taken to prevent annealing of the tubing and fittings when making the connections.

2.9 LUBRICATION

2.9.1 Main Lube Oil System

The main gearbox system lubricant must be a heavy duty industrial synthetic gear oil, suitable for enclosed gear drives with operating conditions similar to the John Day fishwater pump gearboxes.

2.9.2 Thrust Bearing Lube Oil

The thrust bearing lube oil must be designed for high level chemical and thermal stability and resistance to sludging and varnishing, and optimized for maximum service life.

2.10 SHAFT COUPLINGS

Provide gear type of machined stainless steel construction capable of transmitting the applied design torques.

2.10.1 General

Provide couplings capable of the horizontal installation and design for non-reversing loads and a maximum 525 RPM operating speed. The couplings are to be capable of handling a maximum torque of 126,050 inch-pounds with a minimum 2.0 service factor. Provide couplings with sufficient capacity to develop the full strength of the shafting which they connect and are to be pressed and keyed thereon. All hub bores are to meet the dimensional and tolerance specifications in accordance with AGMA 9002 unless otherwise indicated. The key fit design is to be in accordance with paragraph entitled KEYS AND KEYSEATS. Equip couplings with lube plugs; enclose and seal with an elastomeric O-ring to retain the lubricant. Provide couplings which are oiltight under both static and dynamic operating conditions. Use SAE grade 8 bolts unless specifically used for shear applications by the manufacturer to achieve published shear strengths. Minimize misalignment for gear couplings by not exceeding the manufacturer's recommendations for installation limits pertaining to gap-hub separation, angular alignment, and parallel offset alignment measurements.

2.10.1.1 Gear Type Couplings

Flanged with exposed bolt, double engagement, made of forged steel. Provide couplings which transmit torque by means of external gears on hubs engaging in internal gears on the coupling sleeves. Machine gears in accordance with AGMA 9002 and AGMA 908.

2.11 KEYS AND KEYSEATS

All shafts are to have standard keyways and keys in accordance with ASME B17.1, Class 2.

2.12 PAINTING

Gearbox paint coatings and application must be as recommended by the gearbox manufacturer. Standards coatings are to be compatible with the lubrication and environmental conditions specified or recommended. Touch up all damaged painted surfaces after installation.

PART 3 EXECUTION

3.1 METAL FABRICATION

3.1.1 General

Fabricate components and assemblies in compliance with the requirements of Section 05 50 14.00 25 METAL FABRICATIONS, unless otherwise specified herein. Where specification requirements are similarly covered in both sections the specification section, apply the more stringent requirements.

3.1.2 Material

Straighten material before being laid off or worked. If straightening is necessary, straighten by methods that do not impair or alter the metal. Sharp kinks, bends, or overcuts of material are cause for rejection of the material. Material with welds will not be accepted except where welding is specified, indicated, or otherwise approved. Flame cutting of material is not allowed. Shearing is to be accurately done and all portions of the work neatly finished. Ensure corners are square and true unless otherwise indicated.

3.1.3 Dimensional Tolerances for Structural Work

The overall dimensions of an assembled structural unit are to be within the tolerances indicated on the drawings or as specified for the item of work. Where tolerances are not specified in other sections of these specifications or shown, a variation of 1/32 inch is permissible in the overall length of component members with both ends milled and component members without milled ends can not deviate from the dimensions shown by not more than 1/16 inch for members 30 feet or less in length and by not more than 1/8 inch for members over 30 feet in length.

3.2 MACHINE WORK

3.2.1 Finished Surfaces

a. Surface finishes indicated or specified herein, are to be in accordance with ASME B46.1. Determine compliance with specified surface by sense of feel and by visual inspection of the work compared to Roughness Comparison Specimens in accordance with the provisions of ASME B46.1. Values of roughness width and waviness height are not specified but have to be consistent with the general type of finish specified by roughness height. Flaws such as scratches, ridges, holes, peaks, cracks, or checks which will make the part unsuitable for the intended use are cause for rejection.

b. Where the finish is not indicated or specified, the type of finish is that which is most suitable for the particular surface and provides the class of fit required. Maximum surface roughness of any surface is 250 micro-inch. Indicate surfaces to be machine finished by symbols which conform to ASME B46.1.

3.2.2 Unfinished Surfaces

In so far as practicable, lay out all work to secure proper matching of adjoining unfinished surfaces. Where there is a large discrepancy between adjoining unfinished surfaces, chip and grind smooth or machine to secure proper alignment. Unfinished surfaces are to be true to the lines and dimensions indicated and have to be chipped or ground free of all projections and rough spots. Fill depressions or holes not affecting the strength or usefulness of the parts in a manner approved by the CO.

3.2.3 Pin Holes

Bore pin holes true to gages, smooth, straight, and at right angles to the axis of the member. Perform the boring after the member is securely fastened in position.

3.3 NONDESTRUCTIVE EXAMINATION

3.3.1 NDT Agency Requirements

Conduct NDT examinations using suitable equipment and qualified personnel. Provide written approval of the examination procedures and perform the examination tests in the presence of the CO. Persons performing the NDT examination are to be qualified for the specific procedure used in accordance with ASNT SNT-TC-1A. Submit nondestructive examination certification of qualified persons, procedures and equipment performing or used for nondestructive testing.

3.3.2 Gear Nondestructive Testing Examination

Perform magnetic particle and liquid dye penetrant examination after fabrication of all gears. Conduct the testing in accordance with the requirements set forth in ASTM E709 and ASTM E165/E165M, respectively. Gears found to have unacceptable relevant indications are cause for rejection of the gear component. Record final NDT examination results in an Gear Inspection Log which identifies final NDT inspection of all gears inspected and submit the log.

3.3.2.1 Gear Teeth (Magnetic Particle or Dye Penetrant)

The gear teeth are defined as all material beyond a radius equal to the root diameter minus 1/16-inch. Only indications with major dimensions greater than 1/16-inch are considered relevant. The following relevant indications are unacceptable:

a. Any linear indications greater than 3/16-inch (a linear indication is defined as having length three times its width)

b. Rounded indications with dimensions greater than 3/16-inch

c. Four or more relevant indications in a line separated by 1/16-inch or less, edge to edge

d. Ten or more relevant indications in any 6 square inches of surface with the major dimension of this area not to exceed 6 inches when taken in the most unfavorable orientation relative to the indications being evaluated

3.3.2.2 Gear Spokes and Hub (Dye Penetrant)

The gear spokes and hub are defined as all material inside a radius of equal to the root diameter minus 1/16 inch. Only indications with major dimensions greater than 1/4 -inch are considered relevant. The following relevant indications are unacceptable:

a. Any linear indications greater than 1/2-inch (a linear indication is defined as having length three times its width)

b. Rounded indications with dimensions greater than 1/4-inch

c. Four or more relevant indications in a line separated by 1/8-inch or less, edge to edge

d. Ten or more relevant indications in any 6 square inches of surface with the major dimension of this area not to exceed 6 inches when taken in the most unfavorable orientation relative to the indications being evaluated

3.3.3 Forgings and Weldments

Perform non-destructive examinations of all forgings and weldments in accordance with Section 05 50 14.00 25 METAL FABRICATIONS, unless otherwise specified.

3.4 GEAR CERTIFICATION

Prepare certified profile (involute) charts and certified tooth alignment (lead) charts for all gears fabricated to meet the American Gear Manufacturer's Association AGMA gear quality as specified for each gear to be fabricated. Satisfy a minimum contact ratio of 1.5 or higher. These charts are to be accurate to within +/-0.0005 inches and drawn directly by metrology methods and the use of a calibrated probe coordinate measuring machine that meets the requirements of ISO 10360-2. Submit these charts for both faces of all driven gear and drive pinion gear teeth arrangements. The tooth alignment charts need to span the entire face width of the tooth at the pitch line and indicate the tooth centerline. The profile charts are to indicate the theoretical involute line and span from base circle to tooth tip at the tooth centerline. Label scales on all charts. Charts are required to be traceable to the specific teeth from which they are measured.

3.5 WELDING

Unless otherwise specified, conform welding to the provisions of AWS D1.1/D1.1M, Sections 1 through 8 and Section 10. Welders and welding operators are to pass the qualification tests as prescribed by AWS D1.1/D1.1M, Section 5 before being assigned to production work.

3.6 MISCELLANEOUS PROVISIONS

3.6.1 Cleaning of Corrosion-Resisting Steel

After fabrication, remove oil, paint, and other foreign substances from corrosion-resisting steel surfaces. Clean by vapor degreasing or by the use of cleaners of the alkaline, emulsion, or solvent type. After the surfaces have been cleaned, final rinse with clean water followed by a 24 hour period during which the surfaces are intermittently wet with clean water and then allowed to dry for the purpose of inspecting the clean surfaces. Visually inspect the surfaces for evidence of paint, oil, grease, welding slag, heat treatment scale, iron rust, or other forms of contamination. If evidence of foreign substance exists, clean the surface in accordance with the applicable provisions of ASTM A380/A380M. Submit the proposed method of treatment. After treatment visually reinspect the surfaces. Brushes used to remove foreign substances may only have stainless steel or nonmetallic bristles. Remove any contamination occurring subsequent to the initial cleaning by one or more of the methods indicated above.

3.6.2 Lubrication

Lubricate all the components of the equipment requiring lubrication using only the lubricants specified. Provide and lubricate the components and assemblies, in their entirety, after assembly with a lubricant recommended by the equipment manufacturer.

3.7 SHOP ASSEMBLY AND TESTS

3.7.1 General

a. Each machinery unit consisting of the reducer is to be completely assembled on its structural steel base (machinery base as indicated) in the shop and tested in the presence the CO. Notify the CO at least 14 calendar days before testing of each machinery unit. This notification includes information on how many units will be tested and the estimated time frame involved with each test.

b. The witnessing of a particular test may be waived by the CO; however, the approved commissioning shop test procedures, notification, and documentation should still be performed as required by these specifications. Once informed that Government personnel will witness the test(s), notify the CO that a particular test is scheduled as planned a minimum of 48 hours prior to the test(s). Perform all necessary preparations and preliminary testing prior to issuing the 48 hour notification.

c. Commence testing upon the arrival of Government personnel at the scheduled location and time. Design and furnish a test rig and facilities (within the continental United States) suitable for performing the tests. Submit details of the test rig and its location. Address in the submittal aspects including adequacy of rig strength, including, but not limited to, foundations; access to the test rig; availability of suitable power and cranes; how the work will be protected; how the test measurements will be made; and how test results can be verified. Clean all bearing surfaces and lubrication lines and lubricate reducer bearings, couplings, and gears before tests are begun. Fill gearbox with the specified lubricating oil; transfer of lubricating oil from one unit to another is not allowed.

Electrically connect and operate the motors, brakes, and controls at rated voltage. Test and ship the gearbox, components to the job-site fully assembled on the structural steel base (machinery base as indicated).

d. Machinery that is not tested or arrives on site without the machinery base installed will be rejected. Reimburse the Government for all travel, lodging and per diem costs incurred for any Government witness tests that fail to meet the Contract specifications or performance requirements and result in the factory testing being terminated, postponed or rescheduled to correct the deficiencies.

3.7.2 Alignment

Conform alignment of interconnecting shafts to the installation requirements of the coupling and gear manufacturers in accordance with standard AGMA practices. Accurately align each machinery or structural unit by the use of stainless steel shims or other approved methods so that no binding in any moving parts or distortion of any member occurs before it is fastened in place. The alignment of all parts with respect to each other is to be true within the respective manufacturer's tolerances required. Set machines true to the elevations indicated.

3.7.3 Anti-Seize Lubricant

Assemble threaded portions of the assemblies using an anti-seize lubricant that prevents galling of parts and corrosion, allows for easy disassembly of parts, and reduces friction unless otherwise noted or specified. Select anti-seize lubricant that is a standard product designed for the intended use.

3.7.4 Acceptance

All readings taken from the equipment, components or assemblies are required to be within the specified limits. Failure of any part to meet these Contract requirements is cause for rejection of the entire quantity until action is taken to correct defects and prevent recurrence and such actions have been approved by the CO. Retesting is subject to the same random sampling and testing procedures as the original lots.

3.7.5 Gages

Make gages available to the Government at the fabrication site for use in checking critical dimensions. Gages are steel tape, vernier, micrometer, Gar S22 Surface Finish Comparator, etc.

3.8 FIELD ERECTION AND TESTS

Install the machinery under supervision of the erecting engineer as specified in specification Section 15 00 00.03 25 FISHWATER PUMP REHABILITATION. Submit the installation and alignment procedure and install furnished machinery with the approved procedure. In the submittal provide detailed instructions concerning the installation and alignment procedures for the equipment to be furnished. The procedure has to include consideration of all the other work that is obligated to be performed at the site. Base the procedure on a proper sequence of construction that will complete the work with safety, efficiency, and in full accordance with these specifications and Section 15 00 00.03 25 FISHWATER PUMP REHABILITATION. Include detailed information on the method

proposed to install and align the new machinery with the existing fish turbine unit. The support method, any engineering computations, and support drawings have to be designed and certified by a licensed professional engineer.

3.9 EQUIPMENT WARRANTY

Submit manufacturer's standard warranty or guarantee for equipment, e.g., gearbox, or any other equipment. Identify any warranties that extend beyond a one year period.

3.10 OPERATIONS AND MAINTENANCE DATA

Unless otherwise specified, all operation and maintenance manuals are to be comprehensive to the fish pump system with independent sections for each unique piece of equipment. Include six copies of the following bound information.

a. Safety precautions

b. Operator prestart

c. Normal operations

d. Emergency operations

e. Environmental conditions

f. Lubrication data

g. Preventive maintenance plan and schedule

h. Cleaning recommendations

i. Troubleshooting guides and diagnostic techniques

j. Wiring diagrams and control diagrams

k. Maintenance and repair procedures

l. Removal and replacement instructions

m. Spare parts and supply list

n. Product submittal data

o. O&M submittal data

p. Parts identification

q. Warranty information

r. Testing equipment and special tool information

s. Testing and performance data

t. Contractor information

Submit six hard copies of the OPERATIONS AND MAINTENANCE (O&M) MANUAL

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 15 -

15 00 00.03 25

FISHWATER PUMP REHABILITATION

PART 1 GENERAL

1.1 GENERAL INFORMATION
1.2 REFERENCES
1.3 SUBMITTALS
1.4 QUALITY ASSURANCE
1.4.1 Drawing Index
1.4.2 General Layout Drawings
1.4.3 Verification of Dimensions
1.4.4 Manufacturer and Assembler
1.4.5 Erecting Engineer Services
1.5 DELIVERY, STORAGE, AND HANDLING
1.5.1 Delivery, Storage and Handling of Equipment
1.5.1.1 Packaging
1.6 CONTRACTOR WORK PLAN AND PROCEDURES

PART 2 PRODUCTS

2.1 Pump Shaft Assembly
2.2 PUMP PROPELLER ASSEMBLY
2.3 PAINTING
2.4 SHOP ASSEMBLY AND TESTS
2.4.1 General
2.4.2 Alignment
2.4.3 Balance
2.4.4 Anti-Seize Lubricant
2.4.5 Acceptance
2.4.6 Gages

PART 3 EXECUTION

3.1 GENERAL
3.1.1 Instrument Calibration
3.1.2 Shop Drawings
3.2 FABRICATION
3.2.1 General
3.2.2 Material
3.3 MACHINE WORK
3.4 FASTENER PRELOAD
3.5 WORK DESCRIPTION
3.5.1 New Upper and Lower Pump Bearing Housing
3.5.1.1 Furnish Mounting Hardware
3.5.2 New Upper and Lower Bearing Housing Greaseless Bearing Liners
3.5.3 Lower Pump Assembly Rehabilitation
3.5.3.1 General
3.5.3.2 Pump Cover Plate

3.5.3.3 Diffuser Decking
3.5.3.4 Component Removal
3.5.3.5 Propeller Shipment
3.5.3.6 Clean and Inspect Embedded Pump Components
3.5.3.7 Shop Cleaning and Preparation for Inspections
3.5.3.8 Provide New Pump Shaft and Components
3.5.3.9 Lower Bearing Sleeve Installation
3.5.3.10 Pump Propeller Refurbishment
3.5.3.11 Shop Assembly
3.5.3.12 Painting of Lower Rotating Components
3.5.4 Extension Shaft Repair and Installation of New Sleeve
3.5.4.1 Upper Shaft Sleeve
3.5.4.2 Extension Shaft
3.5.5 Clean and Paint Rotating Parts of the Pump Assembly
3.5.5.1 Shop Painting
3.5.5.2 Field Painting
3.5.6 Clean and Prepare Mounting Surfaces for Upper and Lower Bearings
3.5.6.1 Surface Preparation
3.5.7 Reassemble Pump Components and Measure Shaft
3.5.7.1 Site Work
3.5.7.2 Preliminary Alignment
3.5.7.3 Gearbox Installation
3.5.7.4 Final Alignment
3.5.7.5 Final Alignment Check
3.5.7.6 Final Assembly
3.5.8 Final Gearbox Mounting
3.6 FIELD QUALITY ASSURANCE
3.6.1 Shop Inspection
3.7 NONDESTRUCTIVE EXAMINATION
3.7.1 NDT Agency Requirements
3.8 WELDING
3.9 FIELD ERECTION AND TESTS
3.9.1 General
3.9.2 General Test Procedure
3.9.3 Crane Availability
3.9.4 Schedule
3.10 ERECTING ENGINEER
3.11 STARTUP AND ACCEPTANCE TEST
3.12 EQUIPMENT WARRANTY
3.13 OPERATIONS AND MAINTENANCE DATA

-- End of Section Table of Contents --

15 00 00.03 25

FISHWATER PUMP REHABILITATION

PART 1 GENERAL

1.1 GENERAL INFORMATION

The work scope for fish pump Unit 2 and optional work for fish pump Unit 1 and fish pump Unit 3 covered under this specification includes the following:

a. Preparation of drawings and data.

b. Destructive removal of the existing pump shaft.

c. Fabrication and final machining of a new pump shaft.

d. Repair of the existing propeller for mounting to new pump shaft.

e. Fabrication and machining of new stainless steel sleeves for the rehabilitated upper and lower bearing assembly.

f. Fabrication of new upper and lower fish pump bronze bearing housings for the insertion of new greaseless bearing liners.

g. Providing new rough cut greaseless bearing material and final machining for the rehabilitated upper and lower bearing assemblies.

h. Drilling and tapping the existing bearing housing for insertion of the new greaseless bearing liners, mounting of the liners in the housing, and measuring the inner diameter of the mounted liner.

i. Providing new standard fasteners and dowel pins for assembly.

j. Providing other parts and materials as necessary for rehabilitation.

k. Machining the existing upper shaft flanges, rabbets, and indicating bands to attain plumb and straight shaft.

l. Prepare the existing upper shaft, lower shaft, hub, and blades to manufacturer's recommendation for application of new paint.

m. Application of new water immersable paint coating to the upper shaft, lower shaft, hub, and blades.

n. Cleaning the mounting locations of the upper and lower bearing housings to sound metal.

o. Machining the spigot diameter on the lower bearing housing and aligning and doweling to the diffuser mounting location.

p. Machining the spigot diameter on the upper bearing housing and aligning and doweling to the pump cover plate.

q. Assembly of the fish pump and mounting to the gearbox.

r. Measurement and recording of plumb and runout of free hanging shaft and blade tip clearances.

s. Performing the final shimming and doweling of the gearbox and mounting in it's final location.

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.

AMERICAN SOCIETY FOR NONDESTRUCTIVE TESTING (ASNT)

ASNT SNT-TC-1A	(2020) Recommended Practice for Personnel Qualification and Certification in Nondestructive Testing

AMERICAN WELDING SOCIETY (AWS)

AWS D1.1/D1.1M	(2025) Structural Welding Code - Steel

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

ANSI/IEEE Std 810	(2015) Standard for Hydraulic Turbine and Generator Integrally Forged Shaft Couplings and Shaft Runout Tolerances

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)

ISO 1940-1	(2003; R 2008) Mechanical Vibration - Balance Quality Requirements for Rotors in a Constant (Rigid) State - Part 1: Specification and Verification of Balance Tolerances

1.3 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" 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

Installation and Alignment Procedure; G, DO

Commissioning; G, DO

Pre-Functional Checklist

Functional Checklist

Support Method; G, DO

SD-02 Shop Drawings

Drawing Index; G, DO

General Layout Drawings; G, DO

Bill of Materials; G, DO

Shop Drawings; G, DO

As-Built Drawings; G, DO

SD-03 Product Data

Shipping Bills

SD-06 Test Reports

Final Operating Test; G, DO

Startup and Acceptance Test; G, DO

Inspection Log

Shop Assembly and Tests

Balancing Procedure; G, DO

SD-07 Certificates

Equipment Warranty

Erecting Engineer Installation and Operation; G, DO

Nondestructive Examination Certification

Commissioning Document; G, DO

Equipment Manufacturer's And Fabricator's Qualifications; G, DO

SD-10 Operation and Maintenance Data

Operations and Maintenance (O&M) Manual; G, DO

1.4 QUALITY ASSURANCE

1.4.1 Drawing Index

Submit a Drawing Index for all drawings related to the work performed in this specification. The information provided in the index must include drawing numbers, revisions and titles for each manufacturer drawing listed. The index must also be inserted as an appendix to the new Operation and Maintenance manuals.

1.4.2 General Layout Drawings

Provide General Layout Drawings for work performed under this specification. General layout drawings must include all details related to fishwater pump rehabilitation, and must include the general assembly views of all components of the pump shaft assembly and propeller assembly

with each part item number referenced to a bill of materials listing that will be included on the drawing. Bill of materials must include listing of part item numbers, quantity required, part name, material spec, and individual part number. Drawings must be submitted in accordance with Section 01 33 00, SUBMITTAL PROCEDURES. A set of 11- by 17-inch final approved versions of the general layout drawings must also be inserted as an appendix to the new Operation and Maintenance manuals.

1.4.3 Verification of Dimensions

The Contractor must become familiar with details of the work, verify dimensions at the shop and on-site, and advise the Contracting Officer (CO) of any discrepancy before performing any work.

1.4.4 Manufacturer and Assembler

Manufacturing and assembly of the fish pump unit is to be performed by a Contractor and fabrication company that has been normally and regularly engaged in assembly, and manufacture of heavy machinery over the preceding five years. Changes to the dimensions shown on the drawings and in the Bill of Materials for the fish pump (including structural supports) requires written approval from the CO. Submit Equipment Manufacturer's and Fabricator's Qualifications showing evidence and years of experience for each of the equipment manufacturers and fabricators. Identify any certifications, standards, and/or professional organizations the manufacturers comply with or are members of.

1.4.5 Erecting Engineer Services

a. Provide the services of one or more erecting engineers onsite during the installation and startup of each defined major piece of equipment and subassembly. The erecting engineer(s) are responsible to technically supervise and provide instruction for the equipment to be installed and operated. The major pieces of equipment and subassemblies requiring engineering services is defined as follows:

(1) Fish Pump Gearbox

(2) Pump Shaft Assembly

(3) Pump Propeller Assembly

b. Upon completion of the work and at a time designated, provide the services of one or more erecting engineers for training Government personnel in accordance with the requirements of paragraph FIELD TRAINING.

1.5 DELIVERY, STORAGE, AND HANDLING

1.5.1 Delivery, Storage and Handling of Equipment

Protect equipment and components from corrosion, deformation, and other types of damage. Store items in enclosed and secured areas free from contact with soil. Provide moisture proof weather protection for all equipment stored in outdoor locations. Transport, handle and store all equipment in accordance with the manufacturer's written instructions. Remove and replace damaged items with new items. Ship each subassembly completely assembled. Submit the shipping bills with the delivery of finished pieces to the site. The major pieces of equipment and

subassemblies for this Contract are defined to include the following:

a. Fish Pump Gearbox

b. Pump Shaft Assembly

c. Pump Propeller Assembly

1.5.1.1 Packaging

Package equipment and subassemblies in accordance with 15 00 00.02 25 FISHWATER PUMP GEARBOX, except as noted below.

a. The finish machined bearing housings and Contractor provided parts must not be prepared for shipment back to the Project until they have been inspected and signed off by the Contractor and the Contracting Officer's Representative (COR). The sign-off sheet must be included in the shipment packing list.

b. The housing must be shipped to the Contractor's shop with the two halves bolted together and tightened to snug tight. The housing must be shipped back to the Project with the liner mounted inside the housings and the housing bolted together and tightened to snug tight.

c. All other pump components that are shipped to the Contractor's shop must be protected from damage in accordance with 15 00 00.02 25 FISHWATER PUMP GEARBOX. A pre-shipment inspection report must be submitted and signed by both the Contractor and the CO or the COR.

d. Heavy parts or machines must be mounted to skids or crated and any articles or materials that might otherwise be lost must be boxed or wired in bundles and plainly marked for identification. All parts exceeding two hundred (200) pounds of gross weight must be prepared for shipment so that slings for handling by crane may be readily attached while the parts are on the car or transport truck.

1.6 CONTRACTOR WORK PLAN AND PROCEDURES

Provide a detailed work plan for this rehabilitation work. Provide detailed procedures for each individual section. Do not arbitrarily perform machining or other permanent changes to the pump components without Government approval. All changes must be reflected in the 'as-built' drawings. Include the following items for each individual section:

a. Personnel required and description of job function.

b. Equipment required and access requirements for equipment, if applicable.

c. Step by step procedure for performance of the work.

PART 2 PRODUCTS

2.1 Pump Shaft Assembly

The pump shaft assembly consists of the new pump shaft, lower bearing assembly, keys, fasteners, dowels, sleeves and other components necessary to assemble the the new pump shaft assembly.

2.2 PUMP PROPELLER ASSEMBLY

The pump propeller assembly consists of the pump propeller, hub, pump shaft assembly, diffuser, diffuser extension cone and other components necessary to assemble the rehabilitated pump propeller with the new pump shaft assembly.

2.3 PAINTING

Paint all exposed ferrous surfaces in accordance with Section 09 97 02.00 25 PAINTING. Paint equipment and components not otherwise specified by Section 09 97 02.00 25 PAINTING with the manufacturer's standard coating system. Standards coatings are to be compatible with the lubrication and environmental conditions specified or recommended. Touch up all damaged painted surfaces after installation.

2.4 SHOP ASSEMBLY AND TESTS

2.4.1 General

a. The upper and lower bearing assembly, pump shaft assembly, and pump propeller assembly Pump Shaft Assembly consisting of the new pump shaft, lower bearing assembly, and pump propeller assembly is to be completely assembled in the shop and tested prior to shipment to John Day Lock and Dam. Testing should consist of measuring clearances between the self-lubricated bushing and the shaft sleeve, a check of the fit and tolerance of the pump shaft into the propeller with keys installed, static balancing of the pump propeller, and dynamic balancing of the pump propeller. The CO or a designated representative may choose to witness shop assembly and testing. Notify the CO at least 14 calendar days before testing of each machinery unit. This notification includes information on what tests are to be performed and the estimated time frame involved with each test.

b. The witnessing of a particular test may be waived by the CO; however, the approved commissioning shop test procedures, notification, and documentation should still be performed as required by these specifications. Once informed that Government personnel will witness the test(s), notify the CO that a particular test is scheduled as planned a minimum of 48 hours prior to the test(s). Perform all necessary preparations and preliminary testing prior to issuing the 48 hour notification.

c. Commence testing upon the arrival of Government personnel at the scheduled location and time. Design and furnish a test rig and facilities (within the continental United States) suitable for performing the tests. Submit details of the test rig and its location. Address in the submittal aspects including adequacy of rig strength, including, but not limited to, foundations; access to the test rig; availability of suitable power and cranes; how the work will be protected; how the test measurements will be made; and how test results can be verified. Clean all bearing surfaces and lubrication lines and lubricate components as needed before tests are begun. Test and ship the components to the job-site fully assembled.

d. Machinery that is not tested or arrives on site without being fully assembled will be rejected. Reimburse the Government for all travel,

lodging and per diem costs incurred for any Government witness tests that fail to meet the contract specifications or performance requirements and result in the shop testing being terminated, postponed or rescheduled to correct the deficiencies.

2.4.2 Alignment

Conform alignment of interconnecting shafts from the Francis turbine to the fish pump propeller to the installation requirements of the coupling and gear manufacturers in accordance with standard AGMA practices. Accurately align each machinery or structural unit by the use of stainless steel shims or other approved methods so that no binding in any moving parts or distortion of any member occurs before it is fastened in place. The alignment of all parts with respect to each other is to be true within the respective manufacturer's tolerances required. Set machines true to the elevations indicated.

2.4.3 Balance

Balance the propeller with the two-plane balancing technique. Balance the propeller at rated operating speed. Check the balance at 110 percent of balance speed, and make needed corrections. Amount of allowable unbalance is in accordance with grade G6.3 of ISO 1940-1. Securely fasten weights needed to obtain the required level of balance to the inside cavity of the propeller hub. Weight may be added by welding additional material inside the hub or by grinding material from the propeller blades. In no case can weights be added to the outside of the hub, vanes, or water passages. Submit balancing procedure at least four weeks prior to the date of balancing. Weigh the finished propeller and weight stamped on the bottom of the hub with weight accurate to 0.5 percent of the total weight of the propeller. Weighing and balancing will be witnessed by the CO. Submit all propeller weights and the results of propeller balancing.

2.4.4 Anti-Seize Lubricant

Assemble threaded portions of the assemblies using an anti-seize lubricant that prevents galling of parts and corrosion, allows for easy disassembly of parts, and reduces friction unless otherwise noted or specified. Select anti-seize lubricant that is a standard product designed for the intended use.

2.4.5 Acceptance

All readings taken from the equipment, components or assemblies are required to be within the specified limits and in accordance with the Contract Specifications. Failure of any part to meet these Contract requirements is cause for rejection of the entire quantity until action is taken to correct defects and prevent recurrence and such actions have been approved by the CO. Retesting is subject to the same random sampling and testing procedures as the original lots.

2.4.6 Gages

Make gages available to the Government at the fabrication site for use in checking critical dimensions. Gages are steel tape, vernier, micrometer, Gar S22 Surface Finish Comparator, etc.

PART 3 EXECUTION

3.1 GENERAL

3.1.1 Instrument Calibration

Take all measurements with instruments capable of measuring to the nearest 0.001" without interpolation, unless otherwise stated and approved. Instruments must have been calibrated within last 90 days prior to the measurements being taken, unless otherwise approved. Furnish certification of calibration data to the Government no later than 20 days after Contract award.

3.1.2 Shop Drawings

Submit Shop Drawings. Each shop drawing must be a detailed dimensional sheet showing all as-built dimensions of each of the fabricated parts covered under this Section. Submit As-built Drawings of the rotating components of the pump assembly and any stationary components modified by this work.

3.2 FABRICATION

3.2.1 General

a. Fabricate components and assemblies in compliance with the requirements of Section 05 50 14.00 25 METAL FABRICATIONS unless otherwise specified herein. Where specification requirements are similarly covered in both sections the specification section, apply the more stringent requirements.

b. Fabricate and install items described in this section and on the Contract Drawings for the south shore fish pump at John Day Project. Fabricate new upper and lower bearing housings. Machine the new housings for insertion of greaseless bearing liners. Drill and tap the housings for liner insertion. Provide finish machined greaseless bearing liners. Mount the liners into their respective housings and taken measurements of the inner diameter of the liners with the housings bolted together in a snug tight condition. Provide machined spare greaseless bearing liners. Package and transport the mew bearing housings with greaseless bearing liners and spare greaseless bearing liners to the John Day Project upon completion.

3.2.2 Material

Straighten material before being laid off or worked. If straightening is necessary, straighten by methods that do not impair or alter the metal. Sharp kinks, bends, or overcuts of material are cause for rejection of the material. Material with welds will not be accepted except where welding is specified, indicated, or otherwise approved. Flame cutting of material is not allowed. Shearing is to be accurately done and all portions of the work neatly finished. Ensure corners are square and true unless otherwise indicated.

3.3 MACHINE WORK

Perform machine work in compliance with the requirements of Section 05 50 14.00 25 METAL FABRICATIONS unless otherwise specified herein. Where specification requirements are similarly covered in both sections

the specification section, apply the more stringent requirements

3.4 FASTENER PRELOAD

Tighten all major fasteners to a minimum preload of two thirds yield strength, with a tolerance of plus or minus five percent, unless otherwise approved. The Contractor must note tightening torque on the 'as-built' drawings.

3.5 WORK DESCRIPTION

3.5.1 New Upper and Lower Pump Bearing Housing

Furnish and install new Upper Pump Bearing Housing per Informational Drawing 54225-1 and 54225-2. Furnish and install new Lower Pump Bearing Housing per Informational Drawing 54226-1 and 54226-2. Note changes made due to field verification on the Shop Drawings and notify the COR as required by this Section.

3.5.1.1 Furnish Mounting Hardware

Furnish all new fasteners, washers, piping, and fittings for the Upper and Lower Bearing Housings needed for the assembly of the housing halves, mounted in the diffuser, and fitted and piped as necessary for attachment of the water piping to the housing at the diffuser housing interface.

3.5.2 New Upper and Lower Bearing Housing Greaseless Bearing Liners

Furnish and install new greaseless bearing liners for the upper and lower bearing housing per Informational Drawing M-003. All bearing liners must comply with 35 05 40.17 25 SELF-LUBRICATED MATERIALS, FABRICATION, HANDLING, AND ASSEMBLY. Each bearing liner half becomes a matched set after fabrication and machining. Match mark each bearing liner to its mated housing after mounting in the bearing housing. Furnish one spare greaseless bearing liner per housing. Notify the Government 30 days prior to beginning installation of the new greaseless bearing liners for connection of the water piping.

3.5.3 Lower Pump Assembly Rehabilitation

3.5.3.1 General

a. The Government will be responsible for connection of water and oil piping to the gearbox. The Government will also be responsible for electrical connection of the pump and gearbox. The Contractor will be responsible for the disassembly and reassembly of the pump components and all work associated with it. The Government will provide cooling water to the top of the cover plate by the base ring for both the packing box and the upper bearing liner. The Contractor must plumb the water lines from the upper bearing housing to this location and perform the coupling. The Government will provide cooling water to the top of the diffuser by the extension cone for the lower bearing liner. The Contractor must plumb the water lines from the lower bearing housing to this location and perform the coupling. There must be two water intakes to each liner positioned at 180 degrees from each other.

b. Most existing stationary and some existing rotating parts were painted with a red lead primer. Properly clean the diffuser, cover plate,

propeller, and other components and dispose of the cleaning residue in accordance with local requirements and 09 97 02.00 25 PAINTING.

c. Paint the propeller.

d. Provide new stainless steel sleeves and perform rough machining such that the new stainless steel sleeves match the dimensions of the stainless steel sleeves shown in the Informational Drawings.

e. Perform final machining of the new stainless steel sleeves to meet fit and finish per bearing liner material manufacturer recommendation.

3.5.3.2 Pump Cover Plate

Match mark the cover plate to the base ring prior to removal. Remove the pump cover plate and place it in a staging area designated by the Government. Clean the cover plate and diffuser in the designated staging area outside of the Powerhouse. Clean the staging area to the as-found condition upon completion of work. Carefully clean and prepare the mounting surface of the upper bearing housing in preparation for mounting the bearing housing to the cover plate. All cleaned surfaces must be protected with a rust preventative compound.

3.5.3.3 Diffuser Decking

Provide safe access to all pump components. Access to the extension cone, diffuser, pump shaft, and propeller is typically accomplished with removable deck plating that is temporarily installed above the diffuser.

3.5.3.4 Component Removal

Match mark diffuser to the embedded casing prior to removal. The Government will supply a crane and crane operator that must be used to remove the pump components including the gearbox and gear base. The Government will provide a jib crane and transfer carriage that must be used to remove the pump components including the gearbox and gear base. The Contractor must provide a Class 2 certified crane operator to operate the transfer carriage and riggers with appropriate training and experience. The Government will designate a staging area for landing the pump components. The diffuser must be removed from the pump shaft and placed in the designated staging area for clean-up. The diffuser and propeller must be removed without causing damage to the components or adjacent structures and adjacent components along the travel path. The Contractor will be responsible for repair or replacement of all such damaged components and structures at their own cost.

3.5.3.5 Propeller Shipment

Prepare the pump propeller for shipment to the Contractor's shop. Protect the propeller from damage both in shipment to the Contractor's shop and back to the John Day project. The pump shaft may be cut off above the propeller hub prior to shipment. Perform a pre-shipment damage inspection with the COR and provide an inspection sheet. The inspection sheet must be signed by the Contractor and the COR prior to shipment to the Contractor's shop.

3.5.3.6 Clean and Inspect Embedded Pump Components

Clean and inspect mounting surfaces and holes for the diffuser, extension,

bearing housing, and other surfaces as necessary. Protect the mounting surface for the diffuser in preparation for reassembly. Visually inspect discharge liner inner diameter surface. Measure discharge liner diameter at a minimum of two elevations in two positions 90 degrees from each other. Take other measurements and checks as necessary. Protect mounting surfaces with a rust-preventative coating. Transfer to an area designated by project personnel after clean-up of the cover plate and diffuser.

3.5.3.7 Shop Cleaning and Preparation for Inspections

a. Propeller: Protect working surfaces of the propeller. Sand blast other surfaces to remove corrosion build-up. Remove existing pump shaft. Perform 100 percent NDT of the propeller using the PT or MT method. Take measurements of the hub bore and keyways and the blade tip to tip diameter, and determine the circularity and concentricity to the hub bore. Salvage or dispose of the existing pump shaft in accordance with local requirements.

b. Propeller Nut and Rotor Support Ring: Thoroughly clean the propeller nut and rotor support ring. Nicks and dings must be filed flush with the surface. Perform 100 percent NDT of these components using the PT or MT method. Visually inspect the threads and surface condition of the propeller nut and perform 100 percent NDT using Eddy Current Testing. Inspect the surface condition of the rotor support and measure the ID and the OD in two places that are 90 degrees apart from each other.

c. Inspection Report: Submit an inspection report showing the condition of the components, field measurements, results of the NDT, and recommendations for repair or replacement as necessary.

3.5.3.8 Provide New Pump Shaft and Components

a. Furnish and install new pump shaft in accordance with Informational Drawing 54192-1, 54192-2, and 54192-3. The shaft must be machined to leave stock on the propeller fit diameters, flange face, and rabbet fit diameters. The flange faces must be stress relieved per ANSI/IEE Std 81.0. Machine new keyways in the shaft per the drawings. Drill/bore the shaft flange for coupling with machining allowance. Coupling holes must be 0.030 inch under planned finished diameter. Coupling bores must be finish reamed in the shop at final assembly. The flange face, rabbet diameter, bearing sleeve, propeller fit diameters, indicating band, and general shaft surface OD must be finish machined to the appropriate dimensions according to the field as-found conditions and Informational Drawings. Pay special attention to the rabbet fit with the pump shaft and the propeller fit up.

b. Provide anti-rotation screw: The anti-rotation screw must be provided from AISI 1040 steel, 5/8"-11 NC. The shear plane must be the screw head.

c. Provide pump shaft keys: The pump shaft keys must be from AISI 1118 key stock. Final machine the keys to meet the tolerance requirements of the Shaft and the propeller as shown on the Worthington Reference Drawings. RX-137991, Pump Shaft drawing and Propeller drawing respectively.

3.5.3.9 Lower Bearing Sleeve Installation

Thermal interference fit the lower bearing sleeve onto the propeller shaft. The design interference on the existing pump units is 0.005-0.006 inch. The final diameter of the sleeve after installation must be 11.000/11.001. Drill, tap, and center bore the sleeve and shaft for installation of the anti-rotation screw.

3.5.3.10 Pump Propeller Refurbishment

Perform pump propeller refurbishment after lower shaft fabrication. Coordinate fit between lower shaft and propeller. Machine the propeller center bore as necessary so bore and mounting surface of the propeller nut are true and perpendicular to each other. Perform welding and grinding necessary to repair cavitation damage as identified in the Inspection Report.

3.5.3.11 Shop Assembly

Assemble the bearing housing with greaseless bushing insert installed around the pump sleeve and check clearances. Install the pump shaft into the propeller with keys and nut to check fit and tolerances. Debur and cleanup shaft and propeller in preparation for shipment and painting.

3.5.3.12 Painting of Lower Rotating Components

Paint the lower rotating components in compliance with Paragraph CLEAN AND PAINT ROTATING PARTS OF THE PUMP ASSEMBLY of this Section.

3.5.4 Extension Shaft Repair and Installation of New Sleeve

Prepare and ship the extension shaft to Contractor's shop and inspect for damage. Perform necessary machining on the extension shaft, install the sleeve, and final machine the sleeve OD. Paint the shaft, prepare shaft for shipment, and ship shaft back to the project for installation.

3.5.4.1 Upper Shaft Sleeve

Furnish and install a new upper shaft sleeve for the extension shaft in compliance with the Information Drawings. The sleeve is fabricated in two pieces and must be welded along the vertical splits when installed on the shaft. The sleeve must be welded to the shaft along the top and bottom edge. The ID of the sleeve must be finish machined and read to install over the mounting area of the shaft. Field measure the diameter of the existing extension shaft and machine the ID of the sleeve per the Informational Drawings to achieve the fit specified by the Information Drawings. Perform final machining of the sleeve OD after installation on the extension shaft.

3.5.4.2 Extension Shaft

a. Securely protect the extension shaft for shipment to the Contractor Shop. Perform a pre-shipment inspection of the extension shaft for damage with the COR. Both parties must sign off on the inspection sheet prior to shipment.

b. Blast the shaft to remove corrosion and other surface damage. Protect the shaft end faces, bolt holes, and mounting location of the sleeve during the blasting operation.

c. Perform NDT of the shaft surface using PD and/or MT. Pay special attention to the change in cross section at the flanges.

d. Dimensionally inspect the shaft. Measure the upper and lower flange coupling bolt hole diameters and locations relative to the rabbet diameters. Measure the rabbet diameters, length, and bearing sleeve fit area. Perform a run-out check between centers with rabbet diameter aligned. Take run-outs of flange faces and bearing sleeve area. Complete and submit inspection reports with recommendations.

e. Field measure the OD where the sleeve is to be mounted and the finished ID of the sleeve. Mount the new stainless steel sleeve and weld the longitudinal splits. Weld the top and bottom edges to the shaft. Machine the OD of the sleeve to the required diameter.

f. Perform a machine clean-up skim cut on the upper and lower rabbet diameters if necessary. The lower rabbet must fit the upper rabbet on the pump shaft. The upper rabbet must fit the rabbet on the gearbox being rehabilitated. No machine cut is to be performed on the upper rabbet of the extension shaft until positive communication with the gearbox manufacturer on final dimensions has been completed.

g. Perform a skim machine cut on the extension shaft coupling faces to make them true as per tolerances in ANSI/IEEE Std 810 if necessary. Perform a skim cut on the indicating bands near the shaft coupling. Any step formed on the shaft must be radiused to 1/32 inch. Shop assemble the upper bearing housing over the sleeve after the final machine cut on the sleeve and check clearances.

h. True bore and ream the lower coupling holes on the extension shaft with the pump shaft in the Contractor's Shop. Body face machine the bolts to match the bolt holes. Assemble the two shafts in the shop. Match mark the bolts to bolt holes and extension shaft to pump shaft for assembly in the field.

i. Paint the extension shaft as described in Paragraph CLEAN AND PAINT ROTATING PARTS OF THE PUMP ASSEMBLY of this Section. Perform final inspections of the shaft and securely crate and ship back to the project for field assembly.

3.5.5 Clean and Paint Rotating Parts of the Pump Assembly

Clean metal surfaces of the upper and lower shaft, pump hub, and blades of rust, corrosion, grease, oil, and other contaminates. Protect the mounting locations of the shaft sleeve, flange faces, and other machined or pertinent surfaces. Apply system 21-A-Z in accordance with Specification 09 97 02.00 25 PAINTING or submit an alternative coating system for approval. Alternative system must be a minimum of three coats. The first coat must be a primer or base coat. The next two coats must be protective overcoats. All three coats must be of a cavitation, corrosion, erosion resistant paint designed for underwater use. Adhere to the surface preparation directions from the paint supplier when preparing the surface for alternative coating system application. Submit a procedure including recommended practices from the paint manufacturer, MSD sheet, and the proposed procedure for application of the coating.

3.5.5.1 Shop Painting

Use the manufacturer's recommendations to prepare the surfaces of the propeller, the extension, and pump shafts for application of the paint and for painting the surfaces. All surfaces that can be finish painted in the shop must be done in that location. Some surfaces will require field painting, including the top of the flanges after fasteners have been installed and the indicating bands. .

3.5.5.2 Field Painting

Field paint all areas marred from shipment and handling, the indicating bands, top of flanges with fasteners installed, interfaces between two flanges or the flange and propeller, the propeller hub end cover and the main fastener under the propeller, etc, with three paint coats. Surfaces must be shop prepared in anticipation of field painting. Notify the Government of surfaces that cannot be shop prepared. The Government understands that field surface preparation will be limited to solution and mechanical cleaning. Perform all painting in accordance with Specification 09 97 02.00 25 PAINTING.

3.5.6 Clean and Prepare Mounting Surfaces for Upper and Lower Bearings

The Contractor must clean up to sound metal the mounting surfaces of the upper and lower fish pump guide bearings, the cover plate, and the diffuser as necessary, including the horizontal bearing surface and centering spigot surface. Surface clean up must be sufficient to mount the bearing housings in a manner that ensures the bearing housings will be rigidly mounted and plumb with the pump shaft. Coordinate a minimum shaft sleeve journal to bearing diametrical clearance with the bearing liner manufacturer. Submit a detailed work plan for the cleanup of the cover plate and the diffuser.

3.5.6.1 Surface Preparation

Clean the surface to a degree sufficient for visual inspection. Provide finish preparation of the surfaces that assures a smooth and clean metal surface. Measure and record the shaft spigot diameters.

3.5.7 Reassemble Pump Components and Measure Shaft

Perform a complete vertical shaft alignment at assembly. Alignment of the pump shaft must be performed using dial indicators mounted in at least two vertical locations along the shaft. Each location must have two dial indicators mounted 90 degrees from each other. Check shaft plumbness and adjust using a precision level. The initial assessments may be made with the pump shafting in one position or static. After the assembled shaft has been attached to the gearbox and is able to be rotated, check and adjust plumbness and alignment of the shafts by a full rotation of the assembled free hanging pump. Mount and center the upper and lower bearing housings on the sleeve and dowel in place while maintain clearance coordinated with the bearing liner manufacturer. A minimum of three dowels must be used for each housing.

3.5.7.1 Site Work

Provide a detailed procedure for installation of the pump components. Alignment and final installation of the pump components may be found in the following paragraphs. In general, the Contractor will be responsible

for the following:

a. Re-installation of the propeller, pump shaft, diffuser, and cover plate. Accurately measure the propeller liner in two directions prior to installation of any pump components. Take accurate upstream/downstream measurements and north shore/south shore measurements of the propeller blade tip to blade tip. Submit these measurements to the Government.

b. Set up and level propeller on cribbing of sufficient height to allow installation of propeller end hub cover.

c. Assemble the lower bearing and install into diffuser.

d. Crib up the diffuser to sufficient height to allow for setting pump shaft through and supported on support ring.

e. Install rotor support ring onto pump shaft.

f. Lift and set pump shaft through lower bearing/diffuser until supported by support ring.

g. Lift pump shaft/diffuser and lower down through propeller.

h. Install propeller nut, tighten one flat, and secure.

i. Install propeller hub end cover.

j. Lift diffuser and shaft/propeller together and lower onto upper casing flange.

k. Re-install maintenance decking atop diffuser.

l. Set diffuser to casing with original dowels. Install fasteners.

3.5.7.2 Preliminary Alignment

The pump shaft and propeller must be made plumb and level and centered in the pump liner and the lower bearing. The propeller and shaft must be fixed in place. Install cover plate with hold down fasteners loose. Install extension shaft onto the pump shaft with temporary fasteners and plumb and level. Install bearing housing with bearing liner and check for clearance and alignment. Center cover plate to the extension shaft.

3.5.7.3 Gearbox Installation

Set the gearbox in place and align with the extension shaft.

3.5.7.4 Final Alignment

Check and adjust alignment between the vertical shaft and the gearbox as necessary.

3.5.7.5 Final Alignment Check

Perform final combined shaft alignment/plumb checks to include two dial indicators 90 degrees apart at two elevations and use the precision level as a minimum. Record the bearing and blade tip clearances. Blade tip measurements must be taken by first finding the longer of the two blades

and then using this blade to take further clearance measurements at the following four locations: upstream, downstream, north bank, and south bank. Record and submit these measurements in a report for Government approval.

3.5.7.6 Final Assembly

Perform final assembly of parts after the Final Alignment Check is accepted by the Government.

a. Apply final paint coating to rotating parts.

b. The gearbox must be final doweled.

c. The upper and lower bearing housing must be doweled in place including the water cooling piping to the connection provided by the Government.

d. Install the rotor support ring on the pump shaft.

e. Complete the packing box, including packing, lantern ring, and gland in upper bearing housing.

f. Install the diffuser extension cone.

g. Install access covers and grating.

h. Install any remaining items to make a final and complete installation.

i. Install new lip seals in the bearing housing. Two must be installed on the lower side of the lower bearing housing and one must be installed in the bottom of the upper bearing housing.

j. Install two new lip seals at the top of the diffuser extension cone.

3.5.8 Final Gearbox Mounting

Permanently mount the gearbox to its sole plate with proper shimming and doweling in place after all measurements have been taken, submitted, and accepted. Permanent mounting of the gearbox must not take place until the Government provides the Contractor with a notice to proceed. Submit detailed information on this procedure, to include location and thickness of necessary shim and size and location of dowels in a written document and shown in detail on a sketch.

3.6 FIELD QUALITY ASSURANCE

Perform all specified quality control inspections and tests. Implement and maintain an inspection log to include copies of all descriptive data for all specified inspections and tests. Make the inspection log available immediately to the Government's inspector upon request. Submit a complete copy of the inspection log to the Government at the end of specified inspections and tests. The Government reserves the right to witness any and all specified quality control (QC) procedures. Provide the Government with one-week advance notice of QC procedure scheduling to allow time for witness coordination. Fully test replacements for all rejected parts as specified herein for the original lots.

3.6.1 Shop Inspection

The Government will send an inspector to visit the Contractor's shop or the shop where the work is being performed to evaluate all inspection data and witness final measurements taken by the Contractor and recorded on the dimension sheet, unless otherwise waived by the CO. Provide the Government with a minimum of 14 days notice and arrange an appropriate time for a Government inspector shop visit. Make all previous Submittals available to the Government for use during the shop visit.

3.7 NONDESTRUCTIVE EXAMINATION

3.7.1 NDT Agency Requirements

Conduct NDT examinations using suitable equipment and qualified personnel. Provide written approval of the examination procedures and perform the examination tests in the presence of the CO. Persons performing the NDT examination are to be qualified for the specific procedure used in accordance with ASNT SNT-TC-1A. Submit nondestructive examination certification of qualified persons, procedures and equipment performing or used for nondestructive testing.

3.8 WELDING

Perform welding in compliance with the requirements of Section 05 50 14.00 25 METAL FABRICATIONS unless otherwise specified herein. Where specification requirements are similarly covered in both Sections the specification Section, apply the more stringent requirements. Unless otherwise specified, conform welding to the provisions of AWS D1.1/D1.1M, Sections 1 through 8 and Section 10. Welders and welding operators are to pass the qualification tests as prescribed by AWS D1.1/D1.1M, Section 5 before being assigned to production work.

3.9 FIELD ERECTION AND TESTS

3.9.1 General

Perform field erection and field tests. Install the equipment furnished under 15 00 00.02 25 FISHWATER PUMP GEARBOX and under this specification under supervision of the erecting engineer under the provisions of paragraph ERECTING ENGINEER. Submit the installation and alignment procedure and install with the approved procedure. In the submittal provide detailed instructions concerning the installation and alignment procedures for the equipment to be furnished. Reference the existing Operations and Maintenance manual for installation and alignment procedures and provide updated procedures as necessary. The procedure has to include consideration of all the other work that is obligated to be performed at the site. Base the procedure on a proper sequence of construction that will complete the work with safety, efficiency, and in full accordance with these specifications. Submit for approval any Support Method to be used. Include detailed information on the method proposed to support the equipment during the work delineated in this section. The support method, engineering computations, and support drawings have to be designed and certified by a licensed professional engineer.

3.9.2 General Test Procedure

Submit the commissioning, pre-functional and functional checklist test

procedures, with a blank test results data sheet for each, prior to the commencement of any tests. Complete all Pre-Functional checklists prior to performing Functional operational tests. The testing is to comply with the requirements herein and as specified below. The test procedure will consist of operating the units for 15 minutes. Inspect each piece of equipment for smooth operation and proper alignment and check all necessary clearances to ensure vibration, binding, or excessive heat does not occur in any moving part. During the test, provide readings of motor currents, RPM, voltage, and bearing temperature. Stop the test immediately if there is any undue noise, vibration, or heat developed in any of the equipment. After correction of alignment and/or all other causes for the interruption of the test, reinspect the unit and resume testing when permitted by the CO. Submit final operating test results for each unit.

3.9.3 Crane Availability

The Government's existing cranes will be available for use in installation of the machinery. Schedule and coordinate operations with the CO. Include such schedule in the installation and alignment procedure.

3.9.4 Schedule

Schedule and coordinate operations with the CO for the Government's installation and removal of the bulkheads for the fish pump unit. Provide a minimum of 14 days advance notice prior to requested date.

3.10 ERECTING ENGINEER

Furnish the services of one or more competent erecting engineers from the equipment manufacturer/fabricator to supervise and direct the erection and installation of this equipment.

a. The erecting engineer(s) are required to be present for all shop erection, inspections, tests, installation and operation of all equipment at the project site.

b. The erecting engineer has responsibility for the equipment meeting all the requirements of these specifications and fulfilling all the Contractor's guarantees.

c. The erecting engineer will verify the fit and alignment of mating components prior to erecting in the field and be present during final connection and all commissioning and field testing for contract compliance. The erecting engineer will keep records of all measurements taken during installation and testing.

d. Upon completion of the installation, commissioning and startup for each specified major equipment or subassemblies, each erecting engineer will submit an erecting engineer installation and operation certification approving the installation and operation of the equipment.

3.11 STARTUP AND ACCEPTANCE TEST

Submit the pre-functional checklist for approval that includes checks, recordings, measurements and verifications to be performed prior to start up. Signature by all parties is required for acceptance. Following the completion of installation, checkout, adjustment, and setting the limit

switches, controls, interlocks, and other control system components as applicable, perform a startup and acceptance test on each machinery unit. Perform the startup and acceptance test in accordance with the approved commissioning functional checklist, record and submit the results on test result forms of the procedure. Signature by all parties is required for acceptance. Include a demonstration of proper functioning of the refurbished unit in the acceptance test. For acceptance, the machinery unit(s) are to be successfully operated a minimum of five days to satisfy the CO that the requirements of the contract have been met and that the performance of the equipment is satisfactory for the purpose intended.

Upon successful completion of the field tests, the rehabilitated fish pump, machinery, accessory items and equipment will be examined by the CO, Erecting Engineer, Contractor, Project Personnel, and if found to comply with the Contract it will be accepted by signature of all parties in a prepared commissioning document. Signatures and Acceptance will not occur until all found deficiencies have been corrected. submit copies of the signed commissioning document document to the CO.

3.12 EQUIPMENT WARRANTY

Submit manufacturer's standard warranty or guarantee for equipment, e.g., speed reducers, or any other equipment. Identify any warranties that extend beyond a 1-year period.

3.13 OPERATIONS AND MAINTENANCE DATA

a. For specifications on the furnishing, installation, operations and maintenance instructions, refer to Section 01 78 23.00 25 OPERATION AND MAINTENANCE DATA. Unless otherwise specified, all operation and maintenance manuals need to be comprehensive to the electro-mechanical operating system with independent sections for each unique piece of equipment. Operation and Maintenance manuals are to comply with the requirements of Data Package 3 in accordance with Section 01 78 23.00 25 OPERATION AND MAINTENANCE DATA.

b. Unless otherwise specified, all operation and maintenance manuals are to be comprehensive to the electro-mechanical operating system with independent sections for each unique piece of equipment. Include six copies of the following bound information.

(1) Safety precautions

(2) Operator prestart

(3) Normal operations

(4) Emergency operations

(5) Environmental conditions

(6) Lubrication data

(7) Preventive maintenance plan and schedule

(8) Cleaning recommendations

(9) Troubleshooting guides and diagnostic techniques

(10) Wiring diagrams and control diagrams

(11) Maintenance and repair procedures

(12) Removal and replacement instructions

(13) Spare parts and supply list

(14) Product submittal data

(15) O&M submittal data

(16) Parts identification

(17) Warranty information

(18) Testing equipment and special tool information

(19) Testing and performance data

(20) Contractor information

c. Submit six copies of the OPERATIONS AND MAINTENANCE (O&M) MANUAL in accordance with paragraph OPERATIONS AND MAINTENANCE MANUALS and in compliance with Data Package 3 in Section 01 78 23.00 25 OPERATION AND MAINTENANCE DATA.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 35 - WATERWAY AND MARINE CONSTRUCTION

SECTION 35 05 40.17 25

SELF-LUBRICATED MATERIALS, FABRICATION, HANDLING, AND ASSEMBLY

PART 1 GENERAL

1.1 SUMMARY
1.2 REFERENCES
1.3 SUBMITTALS
1.4 MANUFACTURER'S QUALIFICATIONS
1.5 HANDLING
1.6 SHIPPING AND TRANSPORT
1.7 SHOP DRAWINGS
1.8 SELF-LUBRICATED COMPONENTS

PART 2 PRODUCTS

2.1 GENERAL SELF-LUBRICATED MATERIAL REQUIREMENTS
2.1.1 Fabric or Fiber Reinforced Polymer Self-Lubricated Materials
2.2 FAILURE CRITICAL BEARINGS (FCB)
2.2.1 FCB Material Qualifications
2.2.2 Approved FCB Materials
2.3 VERIFICATION OF FABRICATION DETAILS
2.4 SEALS
2.4.1 Static Seals
2.4.2 Dynamic Seals
2.5 PRODUCT LUBRICATED PUMP BEARINGS

PART 3 EXECUTION

3.1 FABRICATION
3.2 TEST FITTING
3.3 MECHANICAL FASTENING OF SELF-LUBRICATED COMPONENTS
3.4 BONDING INSTALLATION
3.5 INSTALLATION PLAN
3.6 VERIFYING DIMENSIONS AFTER INSTALLATION
3.7 ASSEMBLY OF MATING COMPONENTS
3.7.1 Cleaning
3.7.2 Final Installation
3.8 OPERATION AND MAINTENANCE MANUALS

-- End of Section Table of Contents --

SECTION 35 05 40.17 25

SELF-LUBRICATED MATERIALS, FABRICATION, HANDLING, AND ASSEMBLY

PART 1 GENERAL

1.1 SUMMARY

This Section specifies fabrication, handling, cleaning, and installation requirements for self-lubricated materials and their mating running surfaces. The upper and lower bearing liners must be fabricated from a fabric or fiber reinforced polymer self-lubricated material suitable for water lubrication during operation.

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.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME B18.2.1	(2012; R 2021) Square, Hex, Heavy Hex, and Askew Head Bolts and Hex, Heavy Hex, Hex Flange, Lobed Head, and Lag Screws (Inch Series)

ASTM INTERNATIONAL (ASTM)

ASTM D412	(2016; R 2021) Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers - Tension
ASTM D570	(2022) Standard Test Method for Water Absorption of Plastics
ASTM D695	(2010) Standard Test Method for Compressive Properties of Rigid Plastics
ASTM D2240	(2015; R 2021) Standard Test Method for Rubber Property - Durometer Hardness
ASTM D3846	(2008) Standard Test Method for In-Plane Shear Strength of Reinforced Plastics
ASTM D5363	(2016; R 2024) Standard Specification for Anaerobic Signle-Componenet Adhesives (AN)

U.S. ARMY CORPS OF ENGINEERS (USACE)

CERL TR 99/104	(1999) Greaseless Bushings for Hydropower Applications: Program, Testing, and Results

1.3 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

Assembly and Installation Plan; G, DO

SD-02 Shop Drawings

Shop Drawings; G

SD-03 Product Data

Self-Lubricated Material Product Data; G,DO

Seal Product Data; G,DO

SD-07 Certificates

Manufacturer's Experience Record; G,DO

Self-Lubricated Material Manufacturer's Warranty;

FCB Material Certifications; G,DO

SD-09 Manufacturer's Field Reports

Post-Assembly QC Report

Acceptance Test Report

SD-10 Operation and Maintenance Data

Operation and Maintenance Manuals; G,DO

1.4 MANUFACTURER'S QUALIFICATIONS

Self-lubricated material manufacturer must have a minimum of five years experience in manufacturing self-lubricated materials. Submit a Manufacturer's Experience Record which details the number of years the manufacturer has been fabricating self-lubricated materials and a description of at least three previous, separate, similar installations within the last five years.

1.5 HANDLING

Handle self-lubricated components in a manner that does not damage or deform the self-lubricated material. Handle components that are the mating running surfaces of self-lubricated materials in a manner that does not damage or scratch the surface finish of the running surfaces. Do not allow self-lubricated components or their mating running surfaces to come into contact with chains, shackles, hooks, wire ropes, or other rigging that can damage them. Perform lifting, maneuvering, and securing of self-lubricated components and their mating running surfaces with fabric straps or other non-marring rigging. Replace self-lubricated components and components that are the mating running surfaces of self-lubricated components, at no cost to the Government, if they are scratched, nicked,

chipped, marred, or otherwise damaged prior to the Government taking possession of the component.

1.6 SHIPPING AND TRANSPORT

Package self-lubricated components and components that are the mating running surfaces of self-lubricated components in a manner that protects them from damage during shipping and transport. Package self-lubricated components in crates or protective boxes with adequate padding prior to shipping or transport. If self-lubricated components are installed in a larger assembly that does not fit within a crate secure protective coverings over the self-lubricated components prior to shipping and transport.

1.7 SHOP DRAWINGS

Prepare and submit Shop Drawings for the self-lubricated components covered under this specification. Within the shop drawings show the complete fabrication dimensions and tolerances, installed dimensions and tolerances, component details, and material types of the self-lubricated components . If the Contract Drawings only show a fit class or require the self-lubricated material manufacturer to determine the fit then detail the specific dimensions and tolerances of the fit in the shop drawings and indicate they are for Government approval. Show the same unit system on the shop drawings that was used in the Contract Drawings.

1.8 SELF-LUBRICATED COMPONENTS

Self-lubricated components covered under this specification are listed below or shown on the Contract Drawings. In addition, self-lubricated components that the Government has designated as a Failure Critical Bearing (FCB) are listed below or shown on the Contract Drawings. FCB requirements are outlined in sections below. Self-lubricated components that are not designated as FCB must meet the general self-lubricated material requirements detailed in Paragraph GENERAL SELF-LUBRICATED MATERIAL REQUIREMENTS below. Provide the following self-lubricated components:

TABLE 1:

Self-Lubricated Component Name	Quantity Required	Failure Critical Bearing (FCB)
Upper Bearing Liner	2	Yes
Lower Bearing Liner	2	Yes

PART 2 PRODUCTS

2.1 GENERAL SELF-LUBRICATED MATERIAL REQUIREMENTS

Submit Self-Lubricated Material Product Data showing the material selected for use are in compliance with the requirements of this specification. Self-lubricated materials must:

a. Be approved by the material manufacturer for use in submerged and marine environments.

b. Have an operating temperature range of 32 to 200 degrees F.

c. Be approved by the material manufacturer for a dynamic bearing pressure of at least 10,000 psi.

d. Have a water absorption of less than 0.1 percent increase in weight for long term immersion as tested in accordance with ASTM D570.

2.1.1 Fabric or Fiber Reinforced Polymer Self-Lubricated Materials

In addition to the general self-lubricated material requirements in Paragraph GENERAL SELF-LUBRICATED MATERIAL REQUIREMENTS above fabric or fiber reinforced polymer self-lubricated materials must:

a. Be fabricated with isopthalic polyester, orthophthalic polyester, vinylester, or epoxy resin.

b. Have polyester reinforcement, or a combination of polyester and polytetrafluoroethylene (PTFE) sheet fabric or fiber strand.

c. Have a minimum compressive yield strength of 15,000 psi as tested in accordance with ASTM D695 with the load applied perpendicular to the fabric/fiber layers.

d. Have a minimum in-plane shear strength of 10,000 psi as tested in accordance with ASTM D3846.

2.2 FAILURE CRITICAL BEARINGS (FCB)

Failure critical bearings are bearing or bushing applications where failure could potentially result in damage to critical systems or, applications where repair or replacement of a failed bearing or bushing would result in a loss of service or operation of a critical system. The designation FCB means failure critical bearing. FCB's are determined by the Government and are identified on the Contract Drawings or in the Contract specifications.

2.2.1 FCB Material Qualifications

The following is required for a material to be considered acceptable for FCB applications:

a. The material must have been tested by the procedure defined in CERL TR 99/104.

b. The material must receive a performance score of 350 or above for both wet and dry testing as evaluated by the USACE Hydro Electric Design Center (HDC) in Portland, Oregon, using the bearing rating system in CERL TR 99/104 Appendix F.

c. The material manufacturer must sign a release agreement allowing public distribution of the material's test results.

2.2.2 Approved FCB Materials

The following list of materials meet FCB requirements:

TABLE 2:

FCB Material Name	Manufacturer	General Material Construction
Triboglide 15M+	ACM Composite Bearings Americas	Fabric Reinforced Polymer
All True Hydro 2069-ATHB	All True Designs	Fabric Reinforced Polymer
CIP Hydro	Columbia Industrial Products	Fabric Reinforced Polymer
Devatex 522	Federal Mogul Corporation	Fiber Reinforced Polymer
Devatex 552	Federal Mogul Corporation	Fiber Reinforced Polymer
HPF	Glacier Garlock Bearings	Fabric Reinforced Polymer
HPM	Glacier Garlock Bearings	Fabric Reinforced Polymer
HPMB	Glacier Garlock Bearings	Fabric Reinforced Polymer
P302-PTFE (previous name: D-Glide FT)	GrayGo International (previous name: Drie-D Americas)	Fabric Reinforced Polymer
C417	Trelleborg Sealing Solutions (previous name: Orkot Engineering Plastics)	Fabric Reinforced Polymer
TXM-M	Trelleborg Sealing Solutions (previous name: Orkot Engineering Plastics)	Fabric Reinforced Polymer

Submit FCB Material Certifications from the material manufacturer stating that the chemical formulations, manufacturing processes and overall structure of the materials supplied are identical to those of the bearings that meet the approved FCB materials above.

2.3 VERIFICATION OF FABRICATION DETAILS

Verify that the fabrication and installation details shown meet the self-lubricated material manufacturer's recommendations. Specifically, verify that:

a. Surface finish and hardness requirements shown for self-lubricated material mating running surfaces are in compliance with the self-lubricated material manufacturer's recommendations.

b. Self-lubricated material clearance fits, interference fits, and tolerances shown comply with the self-lubricated material manufacturer's recommendations.

If these fabrication and installation details are outside of the self-lubricated material manufacturer's recommendations notify the Government by submitting a Request for Information.

2.4 SEALS

Submit Seal Product Data showing the seals selected for use are in compliance with the requirements of this specification.

2.4.1 Static Seals

Static seals must be synthetic ethylene propylene elastomeric o-rings meeting the following material requirements:

PHYSICAL TEST	TEST VALUE	TEST METHOD SPECIFICATION
Durometer Hardness (Shore Type A)	65 to 75	ASTM D2240
Tensile Strength	1450 psi (minimum)	ASTM D412
Elongation at Break	150 percent minimum	ASTM D412
200 percent Modulus	900 psi (minimum)	ASTM D412

2.4.2 Dynamic Seals

Dynamic seals must:

a. Be lip seals or face seals designed to exclude debris and contaminants from the self-lubricated bearing.

b. Be suitable for use in a submerged environment.

c. Be energized with springs fabricated from stainless steel or elastomeric o-rings to provide positive contact between the components being sealed.

d. Be molded or extruded from a polytetrafluoroethylene (PTFE) resin with appropriate fillers to achieve the performance requirements appropriate for the self-lubricated material seal application.

e. Be suitable for running without external lubrication.

2.5 PRODUCT LUBRICATED PUMP BEARINGS

Submerged pump bearing must be externally supplied water lubricated and meet the following requirements:

a. Fabricated from a polymer composite material and not require petroleum lubricants for operation.

b. Operate in fresh water that may contain sand, silt, and vegetative trash.

c. Does not require service or replacement for 100,000 operating hours.

PART 3 EXECUTION

3.1 FABRICATION

Fabricate self-lubricated components and their mating running surfaces to the materials, dimensions, tolerances, and qualities shown. Fabricate self-lubricated components in accordance with the self-lubricated material manufacturer's recommendations.

3.2 TEST FITTING

Test the fit of self-lubricated components with their mating surfaces prior to transporting components on site.

3.3 MECHANICAL FASTENING OF SELF-LUBRICATED COMPONENTS

Install self-lubricated components in accordance with the approved Assembly and Installation Plan. Use silicon bronze fasteners per ASME B18.2.1 to install self-lubricated components unless otherwise noted. Install fasteners with an ASTM D5363 AN0142 thread locker. Install fasteners to a torque value that does not damage or distort the self-lubricated materials per self-lubricated bearing material manufacturer recommendation. Determine the self-lubricated material manufacturer's maximum allowable amount of wear for the self-lubricated component. Install fasteners so that no part of the fastener extends beyond the fully worn running surface of the self-lubricated material.

3.4 BONDING INSTALLATION

Installing self-lubricated materials with a bonding adhesive is not permitted.

3.5 INSTALLATION PLAN

Submit an Assembly and Installation Plan showing the proposed method to assemble and install the self-lubricated components. Include pre-assembly fabrication dimensions, a description of the mechanical fastening procedure including installation torques, post-assembly dimensions, installation procedure,and method to measure and confirm the alignment requirements. Government approval of the plan does not relieve the requirement to provide a successful installation.

3.6 VERIFYING DIMENSIONS AFTER INSTALLATION

After shop assembly, measure self-lubricated components to verify Contract required dimensions and alignment requirements are met. If assembly dimensions are not met, machine or hone the self-lubricated materials to achieve the required dimensions. Perform machining and honing of self-lubricated components in accordance with the self-lubricated material manufacturer's recommendations. Some self-lubricated materials are fabricated with a layer of premium grade material applied only at the running surface of the part. Provide enough premium grade material at running surfaces to allow for post-assembly machining. After completing the installation photograph the self-lubricated component showing the installed condition. Submit a Post-Assembly QC Report detailing the measured dimensions and alignment tolerances after assembly and showing compliance with the approved Assembly and Installation Plan. Include color photographs of the self-lubricated component showing the installed condition.

3.7 ASSEMBLY OF MATING COMPONENTS

3.7.1 Cleaning

Prior to final installation, clean self-lubricated materials and their running surfaces of oil, dirt, and debris using a method recommended by the self-lubricated material manufacturer.

3.7.2 Final Installation

Do not force components together in a manner that causes binding of the running surfaces of the components. Do not use lubricants to assemble self-lubricated components unless otherwise specified.

3.8 OPERATION AND MAINTENANCE MANUALS

Provide six hard copy and one PDF format legible copies of the following information in the Operation and Maintenance Manuals. All information must be the most current and approved copy, reflecting any changes made during the construction process:

a. Shop Drawings.

c. Self-Lubricated Material Product Data.

d. Seal Product Data.

e. Self-Lubricated Material Manufacturer's Warranty.

f. FCB Material Certifications.

g. Post-Assembly QC Report

h. Acceptance Test Report

i. Photographs showing the installed self-lubricated components

j. Guidance for when self-lubricated components need to be replaced

-- End of Section --

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
John Day Fish Pump Rehabilitation

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAG # RAPH	CLASSIFICATION	GOVT OR A/E REVWR	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		
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		01 10 00.00 25	SD-11 Closeout Submittals																
			Limitations On Subcontracting	1.14															
			Compliance																
		01 10 10.00 25	SD-01 Preconstruction Submittals																
			Notification Of Equipment Outage	1.7															
			Utility Connection Request	1.8															
			Access Agreements and Work	1.12	G														
			Areas																
			Temporary Electrical Wiring Plan	1.14.2.2	G														
			Contractor's Planned Equipment	1.15.1	G														
			Methods																
		01 12 00.00 25	SD-01 Preconstruction Submittals																
			Antiterrorism (At) Level I Training	1.4															
			Suspicious Activity Reporting	1.6															
			Training																
			Pre-Screen Candidates Using	1.8															
			E-Verify Program																
			Non-Us Citizens	1.10															
		01 32 01.00 25	SD-01 Preconstruction Submittals																
			Preliminary Schedule	1.7.1	GECCC														
			Initial Schedule	1.7.2	GECCC														
			Schedule Update	1.9.1															
		01 33 00	SD-01 Preconstruction Submittals																
			Submittal Register	1.5	G														
			SD-07 Certificates																

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
John Day Fish Pump Rehabilitation

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAG # RAPH	CLASSIFICATION	GOVT OR A/E REVWR	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION			APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
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		01 33 00	Authorized Shop Drawing	1.10.2															
			Approvers																
		01 35 26.00 25	SD-01 Preconstruction Submittals																
			Crane Operators	1.6.1.3	G														
			Training Plan	1.7.3	G														
			Hazardous Energy Control Plan	1.7.4	G														
			and HEC Procedures Training																
			Certification																
			Accident Prevention Plan (APP)	1.8	G														
			Fall Prevention and Protection	1.8.2	G														
			Plan																
			Fatigue Management Plan (FMP)	1.8.2	G														
			Activity Hazard Analysis (AHA)	1.9	G														
			Inclement Weather and	1.17	G														
			Heat/Cold Stress Management																
			Plans																
			Scaffolding	3.3	G														
			Arc Flash Hazard (AFH) Program	3.6.2	G														
			SD-06 Test Reports																
			Regulatory Citations, Violations,	1.4															
			and Corrective Action																
			Drug and Alcohol Use Prevention	1.5															
			Program																
			Accident or Mishap Reports	1.14.2															
			Crane Testing Reports	1.14.3															
			SD-07 Certificates																

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
John Day Fish Pump Rehabilitation

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH #	CLASSIFICATION	GOVT OR A/E REVWR	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION			APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
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		01 35 26.00 25	Arc Flash Hazard (AFH) Training Certificate	1.7.6															
			Confined Space Entry Permit	1.10															
			Hot Work Permit	1.10															
			Certificate of Compliance	1.14.4															
		01 45 00.00 25	SD-01 Preconstruction Submittals																
			Contractor Quality Control Plan	3.2	G														
			Construction Quality Management for Contractors	3.4.4															
		01 57 19.00 25	SD-01 Preconstruction Submittals																
			Environmental Protection Plan	1.8	G														
			SD-11 Closeout Submittals																
			Environmental Records Binder	1.9	G														
		01 74 19.00 25	SD-01 Preconstruction Submittals																
			Construction Waste Management Plan	1.6	G														
			SD-06 Test Reports																
			Quarterly Reports	1.8.2															
			Annual Report	1.8.3															
			SD-11 Closeout Submittals																
			Final Construction Waste Diversion Report	1.9	G														
		01 78 23.00 25	SD-01 Preconstruction Submittals																
			O&M Manual Execution Plan	1.2	G														
			SD-10 Operation and Maintenance Data																

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
John Day Fish Pump Rehabilitation

CONTRACTOR

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		01 78 23.00 25	Operation and Maintenance Manual	1.3	G													
		01 78 39.00 25	SD-01 Preconstruction Submittals															
			Record Drawings Execution Plan	1.4	G													
			Working As-Built Drawings	1.5														
			SD-11 Closeout Submittals															
			Preliminary Record Drawings	1.8	G													
			Final Working As-Built Drawings	1.8.2.2	G													
			Final Record Drawings	1.9	G													
		05 50 14.00 25	SD-02 Shop Drawings															
			Detail Drawings	1.3.1	G	DO												
			Welding Procedures	2.1.2.1.1	G	DO												
			Welding Repair Plan	2.2.4														
			SD-03 Product Data															
			Filler Metal	2.1.2.1.3.1														
			Lubricant	2.1.5.2														
			SD-06 Test Reports															
			Tests, Inspections, and Verifications	2.2														
			SD-07 Certificates															
			Welding Qualifications	1.3.2														
			Weld Inspection Log	2.2.3.1														
			Certified Welding Inspector	2.2.3.1	G	DO												
			Nondestructive Testing Personnel	2.2.3.2.1	G	DO												
		09 97 02.00 25	SD-01 Preconstruction Submittals															

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
John Day Fish Pump Rehabilitation

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH #	CLASSIFICATION	GOVT OR A/E REVWR	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION			APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
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		09 97 02.00 25	Safety, Health, and	1.3	G	DO												
			Environmental Requirements															
			Accident Prevention Plan	1.3.1	G	DO												
			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	1.3.2.2	G	DO												
			Environmental Protection Plan	1.3.3	G	DO												
			Waste Manifest	1.3.3.1														
			Waste Disposal Plan	1.3.3.1	G	DO												
			Containment Plan	1.3.3.2	G	DO												
			Visible Emissions Monitoring Plan	1.3.3.3	G	DO												
			PM-10 Monitoring Plan	1.3.3.4	G	DO												
			TSP Monitoring Plan	1.3.3.5	G	DO												
			Water Quality Plan	1.3.3.6	G	DO												
			SD-03 Product Data															
			Manufacturer's Safety Data Sheet	2.1	G	DO												
			SD-04 Samples															
			Product Samples	2.1	G	DO												
			SD-06 Test Reports															
			PM-10 Test Report	1.3.3.4														
			TSP Test Report	1.3.3.5														
			Inspection Reports	3.4														
			Medical Status Records	1.3.2.2														

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
John Day Fish Pump Rehabilitation

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAG # RAPH	CLASSIFICATION	GOVT OR A/E REVWR	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION			APPROVING AUTHORITY				MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
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		09 97 02.00 25	Change in Medical Status Report	1.3.2.3														
			Air Monitoring Test Plan	1.3.2.1	G	DO												
			Air Monitoring Test Report	1.3.2.1														
			SD-07 Certificates															
			Certified EHS Professional	1.5.1														
			Certified Lead Laboratory	1.5.2														
			SSPC QP 1 Certificate	1.5.3														
			Qualified Hazardous Paint	1.5.4	G	DO												
			Removal Contractor															
			Coating Thickness Gage	1.5.7														
			Qualification															
			Qualified Coating Applicator	1.5.6	G	DO												
		15 00 00.02 25	SD-01 Preconstruction Submittals															
			Installation And Alignment	3.8	G													
			Procedure															
			SD-02 Shop Drawings															
			Shipping Bills	1.5.1														
			Shop Drawings	2.2.3														
			Shop Drawings	2.2.3														
			Shop Drawings	2.2.3														
			Shop Drawings	2.2.3														
			General Layout Drawings	1.4.3														
			Detail Drawings	1.4.4														
			SD-03 Product Data															
			Manufacturer's Literature and	2.2.3	G	DO												
			Equipment Data															

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
John Day Fish Pump Rehabilitation

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAG # RAPH	CLASSIFICATION	GOVT OR A/E REVWR	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)
		15 00 00.02 25	Manufacturer's Literature and	2.2.3	G	DO													
			Equipment Data																
			Lubricating Oil for Gearbox	2.4.7															
			SD-05 Design Data																
			Calculations	1.4.1															
			SD-06 Test Reports																
			Gear Inspection Log	3.3.2															
			Shop Assembly and Tests	3.7															
			SD-07 Certificates																
			Equipment Manufacturer's and	1.4.12															
			Fabricator's Qualifications																
			Equipment Warranty	3.9															
			Nondestructive Examination	3.3.1															
			Certification																
			Gear Certification	3.4															
			Work Supervisor Qualifications	1.4.7	G	DO													
			SD-08 Manufacturer’s Instructions																
			Cleaning of Corrosion-Resisting	3.6.1	G	DO													
			Steel																
			SD-10 Operation and Maintenance																
			Data																
			Operations and Maintenance	3.10	G	DO													
			(O&M) Manual																
		15 00 00.03 25	SD-01 Preconstruction Submittals																
			Installation and Alignment	3.9.1															
			Procedure																

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
John Day Fish Pump Rehabilitation

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAG # RAPH	CLASSIFICATION	GOVT OR A/E REVWR	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)
		15 00 00.03 25	Commissioning	3.9.2														
			Pre-Functional Checklist	3.11														
			Functional Checklist	3.11														
			Support Method	3.9.1														
			SD-02 Shop Drawings															
			Drawing Index	1.4.1														
			General Layout Drawings	1.4.2														
			Bill of Materials	1.4.2														
			Bill of Materials	1.4.2														
			Shop Drawings	3.1.2														
			As-Built Drawings	3.1.2														
			SD-03 Product Data															
			Shipping Bills	1.5.1														
			SD-06 Test Reports															
			Final Operating Test	3.9.2														
			Startup and Acceptance Test	3.11														
			Inspection Log	3.6														
			Shop Assembly and Tests	2.4														
			Balancing Procedure	2.4.3	G	DO												
			SD-07 Certificates															
			Equipment Warranty	3.12														
			Erecting Engineer Installation and Operation	3.10														
			Nondestructive Examination Certification	3.7.1														
			Commissioning Document	3.11														

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
John Day Fish Pump Rehabilitation

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAG # RAPH	CLASSIFICATION	GOVT OR A/E REVWR	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)
		15 00 00.03 25	Equipment Manufacturer's And	1.4.4	G	DO												
			Fabricator's Qualifications															
			SD-10 Operation and Maintenance															
			Data															
			Operations and Maintenance	3.13	G	DO												
			(O&M) Manual															
		35 05 40.17 25	SD-01 Preconstruction Submittals															
			Assembly and Installation Plan	3.5	G	DO												
			SD-02 Shop Drawings															
			Shop Drawings	1.7	G													
			Shop Drawings	3.8	G													
			SD-03 Product Data															
			Self-Lubricated Material Product	2.1	G	DO												
			Data															
			Self-Lubricated Material Product	3.8	G	DO												
			Data															
			Seal Product Data	2.4	G	DO												
			Seal Product Data	3.8	G	DO												
			SD-07 Certificates															
			Manufacturer's Experience	1.4	G	DO												
			Record															
			Self-Lubricated Material	3.8														
			Manufacturer's Warranty															
			FCB Material Certifications	2.2.2	G	DO												
			FCB Material Certifications	3.8	G	DO												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
John Day Fish Pump Rehabilitation

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAG # RAPH	CLASSIFICATION	GOVT OR A/E REVWR	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)
		35 05 40.17 25	SD-09 Manufacturer's Field																
			Reports																
			Post-Assembly QC Report	3.6															
			Post-Assembly QC Report	3.8															
			Acceptance Test Report	3.8															
			SD-10 Operation and Maintenance																
			Data																
			Operation and Maintenance	3.8	G	DO													
			Manuals																

Below are two samples of the Construction Project Identification sign showing how this panel is adaptable for use to identify either military (top) or civil works projects (bottom). The graphic format for this 4'x 6' sign panel follows the legend guidelines and layout as specified below. The large 4'x 4' section of the panel on the right is to be white with black legend. The 2'x 4' section of the sign on the left

Legend Group 1: One- to two-line description of Corps relationship to project.
Color: White
Typeface: 1.25" Helvetica Regular
Maximum line length: 19"

Legend Group 2: Division or District Name (optional). Placed below 10.5" reverse Signature (6" Castle).
Color: White
Typeface: 1.25" Helvetica Regular

Legend Group 2a: Army Star logo. Placed below Corps Signature and Division or District Name.
Size: 10.5" x 7.875"

Legend Group 3: One- to three-line project title legend describes the work being done under this contract.
Color: Black
Typeface: 3" Helvetica Bold
Maximum line length: 42"

Legend Group 4: One- to two-line identification of project or facility (civil works) or name of sponsoring department (military).
Color: Black
Typeface: 1.5" Helvetica Regular
Maximum line length: 42"

Cross-align the first line of Legend Group 4 with the first line of the Corps Signature (US Army Corps) as shown.

Legend Groups 5a-b: One- to five-line identification of prime contractors including: type (architect, general contractor, etc.), corporate or firm name, city, state. Use of Legend Group 5 is optional.
Color: Black
Typeface: 1.25" Helvetica Regular
Maximum line length: 21"

All typography is flush left and rag right, upper and lower case with initial capitals only as shown. Letter- and word-spacing to follow Corps standards as specified in Appendix D.

with the full Corps Signature (reverse version) is to be screen-printed Communication Red on the white background The designation of a sponsor in the area indicated is optional with Military or Civil Works construction signs. Signs may list one sponsoring entity. If agreement on a sponsor designation cannot be achieved, the area should be left blank.

This sign is to be placed with the Safety Performance sign shown on the following page. Mounting and fabrication details are provided on page 16-4.

Special applications or situations not covered in these guidelines should be referred to the district Sign Program Manager.

Sign Type	Legend Size (A)	Panel Size	Post Size	Specification Code	Mounting Height	Color Bkg/Lgd
CID-01	various	4'x6'	4"x4"	HDO-3	48"	WH-RD/BK

SPILL EMERGENCY - INITIAL REPORT FORM

1. Reporting Name: _____ Responsible Party: _____

2. Location of Spill (include County, Nearest Town, County, Township, Range, Rivermile)

_____

_____

3. Spill Description (time & date spilled, material involved, quantity)

_____

_____

_____

4. Environmental Impacts: Air? Surface Water? Groundwater? Fish? Wildlife?

_____

_____

5. Reporting **Tracking No.** **Date/Time** **POC**

National Response Center: _____

Oregon Emergency Response System: _____

Washington Emergency Management: _____

6. Incident Action Plan: Strategic Goals (what to do) and Tactical Objectives (who & how)

Strategic Goals	***Tactical Objectives***
a. Perform Hazard Assessment	_____
b. Establish Site Security	_____
c. Establish Incident Command	_____
d. Evacuate Injured or Exposed	_____
e. Contain the Spill	_____
f. Control the Spill	_____
g. Initiate Cleanup	_____

Limitations on Subcontracting Attachment

U.S. Army Corps of Engineers, Portland District

Version Date: 12 April 2024

This report is required and is to be completed by the offeror at time of proposal submission AND annually during the performance period of the contract for 8(a) or socio-economic set-aside contracts (including construction) priced at or above $250,000.

Contract Number:	
Prime Contractor Name:	Insert Contractor Name
Total Current Contract Price:	$325,539.33
Type of Set-Aside:	8(a) sole source
Required Participation:	[Put an X in the applicable box below per clause 52.219-14]
	1) Services (except construction). At least **50 percent** of the cost of contract performance incurred for personnel shall be expended for employees of the concern.
x	2) General construction. The concern will perform at least **15 percent** of the cost of the contract, not including the cost of materials, with its own employees.
	3) Construction by special trade Contractors. The concern will perform at least **25 percent** of the cost of the contract, not including the cost of materials, with its own employees.
Joint Ventures: The percentage specified in paragraph (e) of Clause 52.219-14 will be performed by the aggregate of the joint venture participants. If joint venture is comprised of a small business protégé and its mentor, or comprised of 8(a) participants, refer to the Clause for more information.	
	Blue Fields are calculated field. DO NOT OVERWRITE

Participation Calculation as of the Current Invoice		
Amounts shown below shall include amounts from all previous invoices and the current invoice.		
1) Amount Invoiced by the Prime Contractor (as of date of submission, if multi-year contract):		$ 325,000.00
2) Cost of Materials		$ 40,000.00
3) Amount Invoiced Minus Material		$ 285,000.00
4) Portion of Amount Invoiced for Similarly Situated Subcontractors (SSS)*		$ -
5) Portion of Amount Invoiced for Non-Similarly Situated Subcontractors (NSS)		$ 237,000.00
6) Prime Contractor's **15%**	**15%**	$ 48,000.00
Limitation on Subcontracting Percentage = (Total amount invoiced by the Prime Contractor - Portion of total amount invoiced for Non-Similarly Situated Subcontractors (NSS) / Total amount invoiced by the Prime Contractor)		
* Similarly Situated Subcontractor (SSS): A small business Subcontractor that is a participant of the same Small Business Administration (SBA) program that qualified the Prime Contractor as an eligible offeror and awardee of the contract as defined in 13 CFR 125.6 (i.e. Small Business, HUBZone Business, Service Disabled Veteran Owned Small Business (SDOVB), etc.) **ENTRY FOR INFO ONLY. DON'T SUBTRACT**		

Corrective Action Plan
If the Prime Contractor's Participation **15%** noted in line 6 above is not in compliance with the **15%** required by contract clause 52.219-14 then the Prime Contractor shall provide a written corrective action plan below:

Contractor Certification
I certify that to the best of my knowledge and belief, the information provided in the above report is accurate, complete, and current as of the date of report.
Name and Title: Signature Date

THIS ATTACHMENT IS PROVIDED AS AN EXAMPLE. This form will be provided upon request in its native Microsoft Excel format from the CO.

"General Decision Number: OR20260080 01/23/2026

Superseded General Decision Number: OR20250080

State: Oregon

Construction Type: Heavy

Counties: Baker, Crook, Gilliam, Harney, Lake, Sherman,
Wallowa and Wheeler Counties in Oregon.

HEAVY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	01/02/2026
1	01/23/2026

CARP0096-006 06/01/2025

	Rates	Fringes
MILLWRIGHT	$ 59.35	22.38

CARP0503-019 06/01/2025

	Rates	Fringes
CARPENTER (Excluding Form Work)	$ 53.94	16.81

ELEC0048-028 01/01/2025

SHERMAN COUNTY

	Rates	Fringes
ELECTRICIAN	$ 63.50	29.73

ELEC0112-018 06/01/2025

BAKER, GILLIAM, WALLOWA AND WHEELER COUNTIES

	Rates	Fringes
ELECTRICIAN	$ 60.00	27.78

ELEC0280-024 01/01/2025

CROOK COUNTY

	Rates	Fringes
ELECTRICIAN	$ 56.46	23.05

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* ELEC0659-022 01/01/2026

HARNEY AND LAKE COUNTIES

	Rates	Fringes
ELECTRICIAN	$ 47.04	21.84

ENGI0701-038 01/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1	$ 56.66	16.90
GROUP 1A	$ 58.82	16.90
GROUP 1B	$ 60.98	16.90
GROUP 2	$ 54.75	16.90
GROUP 3	$ 53.60	16.90
GROUP 4	$ 50.27	16.90
GROUP 5	$ 49.03	16.90
GROUP 6	$ 45.81	16.90

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: CRANE: Helicopter Operator, when used in erecting work; Whirley Operator, 90 ton and over; LATTICE BOOM CRANE: Operator 200 tons through 299 tons, and/or over 200 feet boom; HYDRAULIC CRANE: Hydraulic Crane Operator 90 tons through 199 tons with luffing or tower attachments;

GROUP 1A: HYDRAULIC CRANE: Hydraulic Operator, 200 tons and over (with luffing or tower attachment); LATTICE BOOM CRANE: Operator, 200 tons through 299 tons, with over 200 feet boom;

GROUP 1B: LATTICE BOOM CRANE: Operator, 300 tons through 399 tons with over 200 feet boom; Operator 400 tons and over

GROUP 2: CRANE: Cableway Operator, 25 tons and over; HYDRAULIC CRANE: Hydraulic crane operator 90 tons through 199 tons (without luffing or tower attachment); TOWER/WHIRLEY OPERATOR: Tower Crane Operator; Whirley Operator, under 90 tons; LATTICE BOOM CRANE: 90 through 199 tons and/or 150 to 200 feet boom; HYDRAULIC CRANE: Hydraulic crane operator, 50 tons through 89 tons (with luffing or tower attachment); Rubber tired scraper with tandom scrapers; BLADE: Auto Grader; Blade Operator-Robotic; Bulldozer over 120,000 lbs and above;

GROUP 3: HYDRAULIC CRANE: Hydraulic crane operator, 50 tons through 89 tons (without luffing or tower attachment); LATTICE BOOM CRANES: Lattice Boom Crane-50 through 89 tons (and less than 150 feet boom); Rubber Tired Scraper: with tandom scrapers; self loading, paddle wheel, auger type, finish and/or 2 or more units; Bulldozer over 70,000 lbs up to and including 120,000 lbs;

GROUP 4: CRANE: Hydraulic Crane Operator, under 50 tons; LATTICE BOOM CRANE OPERATOR: Lattice Boom Crane Operator, under 50 tons; TRACKHOE-ROBOTIC: track and wheel type, up to and including 20,0000 lbs. with any or all attachments; BLADE: Blade Operator; Tractor operator with boom attachment; DRILLING: Churm Drill and Earth Boring Machine Operator; Directional Drill Operator over 20,000 lbs pullback; CRANE: Chicago boom and similar types; Boom type lifting device, 5 ton capacity or less; Rubber-Tired Scraper, single engine, single scraper; Compactor-Self Propelled; Bulldozer over 20,000 lbs and more than 100 horse up to 70,000 lbs; Screed; Compactor with blade; Mechanic Hoist Operator two or more drums, Stiff leg, guy derricl or similar type 50 ton and over

GROUP 5: TRACKHOE-HYDRAULIC: Track type up to and including 20,000 lbs, Wheel type (Ford, John Deer, Case Type); Boom

truck operator; DRILLING: Churm Drill and Earth Boring Machine Operator; Directional Drill Operator less than 20,000 lbs pullback; Forklift over 5 ton, Bulldozer 20,000 lbs or 100 horses or less; Roller; Compactor without blade; Hoist Operator single drum.

GROUP 6: Oiler; Grade Checker; Crane oiler; Forklift; Roller (non-asphalt)

Zone Differential (add to Zone 1 rates):
Zone 2 - $3.00
Zone 3 - $6.00

For the following metropolitan counties: MULTNOMAH; CLACKAMAS; MARION; WASHINGTON; YAMHILL; AND COLUMBIA; CLARK; AND COWLITZ COUNTY, WASHINGTON WITH MODIFICATIONS AS INDICATED:

All jobs or projects located in Multnomah, Clackamas and Marion Counties, West of the western boundary of Mt. Hood National Forest and West of Mile Post 30 on Interstate 84 and West of Mile Post 30 on State Highway 26 and West of Mile Post 30 on Highway 22 and all jobs or projects located in Yamhill County, Washington County and Columbia County and all jobs or porjects located in Clark & Cowlitz County, Washington except that portion of Cowlitz County in the Mt. St. Helens ""Blast Zone"" shall receive Zone I pay for all classifications.

All jobs or projects located in the area outside the identified boundary above, but less than 50 miles from the Portland City Hall shall receive Zone II pay for all classifications.

All jobs or projects located more than 50 miles from the Portland City Hall, but outside the identified border above, shall receive Zone III pay for all classifications.

For the following cities: ALBANY; BEND; COOS BAY; EUGENE; GRANTS PASS; KLAMATH FALLS; MEDFORD; ROSEBURG

All jobs or projects located within 30 miles of the respective city hall of the above mentioned cities shall receive Zone I pay for all classifications.

All jobs or projects located more than 30 miles and less than 50 miles from the respective city hall of the above mentioned cities shall receive Zone II pay for all classifications.

All jobs or projects located more than 50 miles from the respective city hall of the above mentioned cities shall receive Zone III pay for all classifications.

IRON0029-013 07/07/2025

	Rates	Fringes
IRONWORKER (Reinforcing and Structural)	$ 48.31	34.52

LABO0737-005 06/01/2024

	Rates	Fringes

Laborers: (Mason Tender-Cement/Concrete).....$ 43.79 17.05

LABO0737-031 06/01/2024

	Rates	Fringes
Laborers:		
GROUP 1	$ 39.11	17.30
GROUP 2	$ 40.41	17.30

LABORER CLASSIFICATIONS

GROUP 1: Asphalt Spreader

GROUP 2: Grade Checker

PAIN0010-006 07/01/2025

	Rates	Fringes
Painters:		
Brush, Roller and Spray	$ 39.94	16.68

PLUM0290-017 04/01/2025

CROOK, GILLIAM, HARNEY (those portions which lies north and west of a north-south line drawn from the town of John Day to a point five miles east of the town of Burns and three miles south of Burns thence on an airline through the town of Wagontire west to the County lines), LAKE, SHERMAN AND WHEELER COUNTIES

	Rates	Fringes
Plumbers and Pipefitters	$ 60.77	34.72

PLUM0296-010 06/01/2024

BAKER AND HARNEY (Remainder of County) COUNTIES

	Rates	Fringes
Plumbers and Pipefitters	$ 39.90	18.67

PLUM0598-021 06/01/2025

WALLOWA COUNTY

	Rates	Fringes
Plumbers and Pipefitters	$ 65.20	34.91

SUOR2009-078 11/23/2009

	Rates	Fringes
CARPENTER (Form Work Only)	$ 23.50	9.27
CEMENT MASON/CONCRETE FINISHER	$ 21.13	8.90
LABORER: Common or General	$ 22.29	6.04

LABORER: Fence Erection.....$ 23.88 7.45

LABORER: Flagger.....$ 19.31 5.31

LABORER: Pipelayer.....$ 20.52 4.51

LINE CONSTRUCTION: Groundman....$ 31.36 7.27

OPERATOR: Backhoe.....$ 29.80 7.13

OPERATOR: Bobcat/Skid Steer/Skid Loader.....$ 22.77 7.90

OPERATOR: Broom/Sweeper.....$ 32.31 6.43

OPERATOR: Excavator.....$ 30.12 6.23

OPERATOR: Loader.....$ 32.31 6.43

OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....$ 27.59 2.96

TRUCK DRIVER: Dump Truck.....$ 23.79 5.95

TRUCK DRIVER: Off the Road Truck.....$ 31.81 6.33

TRUCK DRIVER: Water Truck.....$ 26.12 6.53

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

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

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least $13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing

on the contract in 2025. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 is available at www.dol.gov/whd/govcontracts.

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

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

Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates

reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

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

a) a survey underlying a wage determination
b) an existing published wage determination
c) an initial WHD letter setting forth a position on a wage determination matter
d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

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

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor

200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

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

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

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

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

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END OF GENERAL DECISION"

US Army Corps of Engineers® Northwestern Division	**CENWP-OD Standing Safety Procedure 385-1** **SAFETY** Portland District Supplement to USACE Hazardous Energy Control Program	Portland District

Table of Contents **23 February 2023**

1.0 Purpose
2.0 Applicability
3.0 References
4.0 Related Procedures
5.0 Definitions
6.0 Emergencies
7.0 Responsibilities
8.0 Training
9.0 Use of Locks and Tags
10.0 Hazardous Energy Control Procedures
11.0 Lockout/Tag out Requiring a Safe Clearance
12.0 Multi-Shift Clearance
13.0 Transfer of a Clearance
14.0 Personal Lockout
15.0 Issuing Individual (II) Clearance
16.0 Interconnect Orders
17.0 Unattended or Remote Stations
18.0 Caution Orders
19.0 Contractors or Non-Project Personnel
20.0 Non-Standard Maintenance
21.0 Abnormal Release and Removal
22.0 Records and Measurements
23.0 Inspection and Program Review
24.0 Attachments / Flow Chart

Foreword

This Standing Safety Procedure (SAF), *Hazardous Energy Control (HEC) Program,* is supplemental to, and is authorized by ER 385-1-31, The Control of Hazardous Energy. ER 385-1-31 is the overall governing document for USACE HEC programs and it mandates that Districts will supplement its contents with specific procedures. This SAF is not intended to be the all-encompassing single source document for the HEC Program. This document strives to capture those processes which have been identified to establish consistent procedures and criteria for the safe and reliable control of hazardous energy at Portland District operated facilities. Instances not specifically identified in this document may very well require additional research into those documents identified in paragraph 3.0 of this document and possibly other industry standard publications to include manufacturer maintenance guidance.

Record of Review and Changes				
Change No.	Page / Paragraph/ Section:	Statement of Review or Change:	Date:	Approval:
1		This document supersedes the CENWP HECP supplement dated 19 Oct 2011. It reformats the previous document into the approved standing procedure format. ENG Forms referenced but not included have been added to this SOP. Most notable changes include the clarification to the definition of the "Affected person" and the deletion of allowing a supervisor to lock on for his/her entire crew. Added sections covering Interconnects and Hold Orders, paragraphs 7.13 and 7.14. Added paragraph 7.16 addressing non-standard equipment maintenance.	28 May 2014	DEW
2	All 7.3, 7.4 8.7.6 8.9.1 9.2 11.0 14.0 16.7 16.8 16.9 18.0	Re-ordered similar to ER385-1-1 PAI Locks the Isolation point vice the DRII Added option to train APs via face to face followed by a written assessment. Changed training interval from annual to every 12 months Personal Lock key spares shall be destroyed PAI Locks Isolation points and TPG Process Added additional requirements to Personal Lockout Interconnect Clearance Procedure for Corps Work Interconnect Clearance Procedure for BPA Work Hold Order Procedure Added section to address LOTO in areas not under the direct control of and Operator	06 May 2016	DEW
3	Header Table of Contents	Full review and update of SAF 385-1; minor changes are not noted below; major changes include: Remove "Fixed Plant" Deleted Non-Hydro section	18 Jan 2020	DEW

Record of Review and Changes

Change No.	Page / Paragraph/ Section:	Statement of Review or Change:	Date:	Approval:
3, cont.	3.0	Deleted reference dates to reflect the most current	18 Jan 2020	DEW
	5.0	Modified points list, affected person definition & deleted fixed plant definition		
	7.4.12	Additional PAI Testing Requirements		
	7.6	Modified Affected Person Responsibilities		
	8.6.7	Modified Training requirements		
	10.1	New or revised AHA required when scope of work changes		
	10.6	Added section for PAI and/or AP verification/ testing performed per AHA, incl. date & time		
	11.5.6	Revised review & verification requirements for isolation of equipment Added PAI and/or AP confirmation of absence of haz. energy via signing either the Safe Clearance Order form or Safe Clearance Activity Log		
	11.6.1.11	Added PAI documents testing on AHA		
	11.6.1.13	Added PAI reviews isolation points with AP(s)		
	11.8.17	PAI documents method of verification on AHA		
	11.8.18	PAI reviews isolation with AP(s)		
	16.0	Deleted Outside Agency steps and responsibilities		
	17.0	Modified when the same person can serve as a II and PAI		
	19 (formerly section 20)	Revised requirements for Contractors and Non-Project Personnel		
	19.8.2	Added PAI and/or AP confirmation of absence of haz energy via signing either the Safe Clearance Order form or Safe Clearance Activity Log		
	Attachments	Revisions to HECP forms Add CENWP-OD Safe Clearance Violation Guidance MFR dated 2016-08-03		

Record of Review and Changes				
Change No.	Page / Paragraph/ Section:	Statement of Review or Change:	Date:	Approval:
4,	17 added 17.1.3 added 17.3 17.3 17.4 17.5 17.6 17.7 17.6	Section 17 edited and restructured for unmanned or remote stations to allow flexibility when the location of the safe clearance is outside the direct control of the facility operator (II). Adds language allowing AI/PAI to perform switching and hang locks and tags. Requires facilities which are not directly under the control of a facility operator to be designated in writing. Adds language for AI/PAI to coordinate with impacted operations personnel for positioning and verification of system components. PAI shall affix tags and initial. Changed to 17.4 Changed to 17.5 Changed to 17.6 Changed to 17.7 Changed to 17.8 Adds: PAI shall remove locks and tags as appropriate, and coordinate with the DRII or facility operators to ensure proper system restoration.	23 Feb 2023	

1.0 Purpose

1.1 This document establishes procedures and operating criteria that shall be complied with throughout the Portland District. It prescribes procedures for the safety of personnel and equipment protection when working on or near any system that produces, uses, or stores hazardous energy. It establishes minimum performance requirements and standards for the control of hazardous energy at Portland District operated facilities.

2.0 Applicability

2.1 This procedure applies to all personnel assigned to the Operations Division of the Portland District, U.S. Army Corps of Engineers and those individuals conducting business at any of the assigned Operating Projects.

2.2 HEC Program has been developed to establish and maintain the greatest practical level of consistency within the Portland District relative to hazardous energy control.

3.0 References.

3.1 ER 385-1-31, Engineering Regulation, Safety and Occupational Health, *The Control of Hazardous Energy*, 30 December 2016.

3.2 29 CFR 1910.147, *Control of Hazardous Energy (Lockout/Tag out).*

3.3 29 CFR 1910.269, *Electric Power Generation, Transmission, and Distribution.*

3.4 29 CFR 1910.333, *Selection and Use of Work Practices.*

3.5 OSHA Directive #CPL 02-00-147, *The Control of Hazardous Energy – Enforcement Policy and Inspection.*

3.6 ANSI C2, *National Electrical Safety Code.*

3.7 ANSI/ASSE A10.44, *Control of Energy Sources (Lockout/Tag out) for Construction and Demolitions Operations*.

3.8 EM 385-1-1, *Engineer Manual, United States Army Corps of Engineers, Safety and Health Requirements Manual.*

3.9 AR 690-700, *Personnel Relations and Services (General)* Chapter 751.

3.10 Bureau of Reclamation, Facilities Instructions, Standards, and Techniques (FIST) Manuals, Volume 1-1, *Hazardous Energy Control Program.*

4.0 Related Procedures

4.1 Switching procedures, CENWP-OD SAF 385-2.

4.2 ER 385-1-100 & EP 385-1-100

4.3 NFPA 70E, Standard for Electrical Safety in the workplace.

5.0 Definitions.

- **Activity Hazard Analysis (AHA)** – A documented risk management process by which the steps (procedures) required to accomplish a work activity are outlined, the actual or potential hazards of each step are identified, and measures for the elimination or control of those hazards are developed.

- **Affected Person (AP)** – A person whose job requires operation or use of a machine or equipment on which servicing or maintenance is being performed under lockout or tag out, or whose job results in them being in an area protected by a clearance. An area being protected by a clearance includes the vicinity where there is an immediate or imminent threat of being injured by hazardous energy. If a person is in an area where an immediate or imminent threat of being injured by hazardous energy exists, they shall be trained as an AP, sign and lock onto a safe clearance.

- **Authorized Individual (AI) –** A qualified person, authorized and designated in writing by the RO to lockout and/or tag out machines or equipment in order to perform installation, servicing or maintenance on that machine or equipment. An Authorized Individual employee becomes a PAI if they are holding the clearance or an Affected Person if their duties include performing servicing or maintenance under that clearance or lockout/tag out procedure.

- **Caution Order –** A procedure to direct attention to abnormal conditions or equipment or special operating instructions which are to be followed.

- **Caution Order Record, ENG Form 1928 (see Attachment 6)** – A form on which to record information pertinent to each Caution Order issued.

- **Caution Order Tag, ENG Form 1924 (see Attachment 4)** – The tag attached to equipment to implement the Caution Order procedure.

- **Clearance perimeter** – The established working boundary or zone of equipment declared isolated from the sources of hazardous energy specified in a clearance. A clearance perimeter may include a combination of interrelated but different forms of hazardous energy common to the equipment.

- **Danger - Do Not Operate Tag, ENG Form 1925 (see Attachment 5)** – The tag that is to be attached to each energy isolation device on equipment or entry point to an area requiring a safe clearance. Computer generated labels/tags are authorized as long as the tag retains compliance with the requirements for tag out devices.

- **Designated Representative to the Issuing Individual (DRII)** – An Authorized Individual identified in the Hazardous Energy Control Program and designated in writing by the RO that is permitted to perform switching and place tags on energy isolation devices.

- **Direct Supervision** – One person is under "direct supervision" of another individual when the person providing the "supervision" is physically with and overseeing the operation being performed by the employee (i.e., a trainee may perform certain job duties when the supervisor/leader/journeyman is physically with them, overseeing the work being performed by the trainee).

- **(Electrically) Qualified Person** – One who has skills and knowledge related to the construction and operation of the electrical equipment and installations and has received safety training to recognize and avoid the electrical hazards that might be present with respect to that equipment or work method. The QP shall be trained to understand: the specific hazards associated with electrical energy; the relationship between electrical hazards and possible injury and the safety-related work practices and procedural requirements as necessary to provide protection from the electrical hazards associated with their respective job or task assignments. See NFPA 70E and OSHA for electrical safety training requirements.

- **Energy Isolation Device** – A physical device that prevents the transmission or release of energy, including but not limited to manually operated circuit breakers, disconnect switches, slide gates, slip blinds, line valves, blocks, or similar devices with a position indicator capable of blocking or isolating energy. The term does not include push buttons, selector switches, and other control circuit type devices.

- **Full personnel protection** – A condition required when a tag out device is used in place of a lockout device. Full personnel protection is provided when

    - The tag out device is attached at the same location as the lockout device would have been attached;

    - All tag out-related requirements of this regulation have been complied with;

- Additional means have been taken to provide a level of safety commensurate with that of a lockout device. Such additional means include the removal of an isolating circuit element, blocking of a control switch, opening and tagging an extra (separated by distance) disconnecting device, or the removal of a valve handle to reduce the likelihood of energizing.

- **Group Lockout and Tag out** – A lockout and tag out procedure used when servicing and/or maintenance is performed by a crew, craft, department or other group and which affords each employee a level of protection equivalent to that provided by the use of a personal lockout or tag out device.

- **Group Lockbox (or Lockbox)** – A device used during group lockout to secure keys for the lockout devices.

- **Hazardous Energy Control Procedure** – The written procedure which clearly and specifically identifies responsibilities and procedural steps for lockout and tag out and the requirements for testing the effectiveness of energy control measures.

- **Hazardous Energy Control Program** – The written program that includes, at a minimum, identification of roles and responsibilities, energy control procedures, energy control locks and tags, procedures for removing energy control locks and tags, employee training, procedure inspections and program review. The Hazardous Energy Control Program shall be developed at the USACE District level to insure the greatest level of consistency among facilities and areas of responsibility.

- **Incidental Person (IP)** – Visitors and/or other employees who may be at a site where energy control procedures are being used but will have no role or activity in an area that is under a safe clearance. Incidental Person training is required if the visitor or other employee has unescorted access to a site where energy control procedures are being used. Incidental Persons are not authorized to enter an area being protected by a clearance. IP training, at a minimum, is required for unescorted access to a Project where HEC procedures are in effect.

- **Isolation** – An activity which physically prevents the transmission or release of energy.

- **Isolation Locks** – Hazardous energy control locks that are placed and removed by the PAI or Authorized Individual.

- **Issuing Individual (II)** – A person, qualified by their knowledge of the type and magnitude of the energy, the hazards involved and the methods or means to control the energy, who is authorized and designated in writing by the RO to issue safe clearances. The Issuing Individual is a person with jurisdiction over an area or project, e.g., they may be the operator in charge of a shift at a powerhouse or lock, the supervisory engineer of a project or facility, or other person having

operational control of systems to be placed under hazardous energy control procedures.

- **Lockout** – The placement of a lockout device on an energy isolation device in accordance with an established procedure ensuring that the energy isolation device and the equipment being controlled cannot be operated until the lockout device is removed.

- **Lockout Device** – A device that utilizes a positive means such as a lock and any associated hardware needed to secure an energy isolation device in the safe or off position to prevent the energizing of machines or equipment. The device must be identifiable, durable, and require excessive force or unusual tools/techniques to be removed by someone other than the Authorized Individual that attached the device. Blank flanges and bolted slip blinds are included.

- **Personal Lock –** Uniquely keyed safety lock issued to or available to personnel to be used only for Hazardous Energy Control procedures. The lock shall identify the person to whom it is issued.

- **Personal Lockout** – Lockout/Tag out not requiring a Safe Clearance.

- **Personal Tag –** A tag required to be used during Personal Lockout (different from the ENG Form 1925).

- **Point of Contact (POC)** – A designated representative to work with non-project personnel or contractors.

- **Principal Authorized Individual (PAI)** – An Authorized Individual who requests and is issued a clearance or who is qualified and identified as being designated to remove equipment from service using lockout/tag out procedures.

- **Responsible Official (RO)** – The person in charge of the project or facility who designates the Issuing and Authorized Individuals and approves and directs the HEC Program. The Responsible Official at each project or facility has overall responsibility for their Project's Program (and associated HEC procedures) and shall ensure that the requirements of this regulation are properly applied and adhered to. The RO will be designated in writing by the NWP-OD Chief of Operations and be limited to the respective Operating Project Manager (OPM). If there is an unusual situation where it is appropriate for the OPM not to be the RO, that request shall be made in writing to the District Chief of Operations.

- **Restricted area** – Any area where hazardous conditions exist or have the potential to exist, such as inside electrical vaults or tanks with potentially hazardous atmospheres.

- **Safe Clearance -** A definite operating arrangement whereby a Principal Authorized Individual, acting individually or as a representative of a group, removes designated equipment from service by lockout or tag out.

- **Safe Clearance Order Sheet** – Documentation from the II to the PAI/AI declaring that the equipment to be worked on has been isolated from sources of hazardous energy. The clearance is the authorization to perform specified work within the perimeter of the clearance. Once the clearance is issued and hung, the order is filed in the control room.

- **Safe Clearance Activity Log** – Documentation of any changes to the safe clearance; for example, additional tag points, temporary tag lifts, clearance transfers, and removal of tag points. The Activity Log is filed in the work permit notebook.

- **Safe Clearance Points List** – List of isolation points included in the Work Permit. Developed by the PAI and approved by the II based, in part, on the scope of work and AHA.

- **Safe Clearance Request** - The form on which requests for safe clearances, and all other pertinent data in connection with safe clearances is maintained. Computer generated facsimiles are authorized (see Form 2).

- **Safe Clearance Sign-In Sheet –** A document log of each individual who is working under the Safe Clearance and locks on to the lockbox. By signing the Sign-In-Sheet, the AP acknowledges they understand and concur the isolation provided for their work is adequate.

- **Stored Energy** – Energy (electrical, mechanical, chemical, gravitational, etc.) that might be found in a charged capacitor, a loaded spring, chemical solutions, air and liquid reservoirs and piping, or similar forms. Stored energy is often referred to as potential energy, the amount of energy an object has due to its position.

- **Switching/Clearing Order** – The step by step procedures to isolate or restore sources of energy.

- **System** – Machinery, equipment, and electrical, hydraulic, or pneumatic lines that are under the operational control of a plant operator or equivalent.

- **Tag out** – The placement of a hazardous energy control tag (ENG Form 1925) on an energy isolation device, in accordance with established procedures, to indicate that the energy isolation device and the equipment being controlled may not be operated until the tag is removed.

- **Temporary Lift Order –** A switching/clearing order allowing isolation point locks and tags to be temporarily removed to perform testing and adjustments.

- **Temporary Protective Grounds (TPGs)** – Equipment intended to provide intentional grounding of an electrical circuit. Sometimes TPGs take the form of electrical conductors spliced or otherwise joined together with connection devices for connecting to an exposed electrical conductor. A manufacturer normally provides this type of device with an established fault-duty rating. Sometimes referred to as safety grounds, grounding sets, grounding devices.

- **Work Permit** – HEC program documentation used by the PAI/AI to manage a Safe Clearance. The Work Permit shall include at a minimum; the Safe Clearance Points List, Safe Clearance Sign-In Sheet, AHA, copy of the Safe Clearance Order, and Safe Clearance Activity Log.

6.0 Emergencies

6.1 In an emergency, the Responsible Official or his designated representative may modify or suspend any of these requirements temporarily as considered necessary to permit proper handling of the specific emergency. However, in handling such emergencies, safety of personnel and members of the public shall be given predominant consideration.

6.2 If emergency switching/clearing is required and Designated Representatives to the Issuing Individual are not available, any person may perform switching/clearing if deemed qualified by the Issuing Individual.

7.0 Responsibilities

7.1 **Responsible Official (RO)** Operations Project Manager (OPM)

7.1.1 Responsible for the development and implementation of Portland District's HEC Program at their respective project.

7.1.2 Maintains overall responsibility for Portland District's HEC Program and associated procedures at their respective project.

7.1.3 Ensures that the requirements of this supplemental regulation are properly applied and adhered to.

7.1.4 Ensures the local HEC Program supplement complies with EM 385-1-1 and ER 385-1-31.

7.1.5 Designates in writing, the Issuing Individuals (II), Designated Representatives to the Issuing Individual (DRII), Principal Authorized Individuals (PAIs), Authorized Individuals (AI) and any special conditions at their respective project.

7.1.6 Assures that the HEC Program is reviewed and updated annually utilizing Attachment 7 Self- Inspection Checklist.

7.1.7 Assures periodic inspections of the facilities HEC procedures.

7.1.8 Assures that plant documentation is available to all persons involved in issuing and holding Safe Clearances.

7.1.9 Ensures that initial and periodic training on Portland District's HEC Program and its procedures is provided.

7.1.10 Coordinates HEC procedures between project operating and maintenance personnel, resource personnel, and contractors or other affected off-site personnel.

7.1.11 Ensures contractors and other affected government or non-government off-site personnel understand and comply with the provisions of the HEC Program.

7.1.12 Assures that appropriate action is taken subsequent to violations of HEC procedures.

7.1.13 Designates, in writing, which equipment may be removed from service using a Personal Lockout.

7.2 **Issuing Individual (II)**

7.2.1 Maintains responsibility for implementing the HEC procedures for all equipment affecting equipment and systems as appropriate to their areas of responsibility.

7.2.2 Maintains all documentation associated with HEC Program, in accordance with record retention requirements.

7.2.3 Temporarily relinquishes control of equipment to PAIs for the accomplishment of service and/or maintenance work under a Safe Clearance.

7.2.4 Directs the switching/clearing and related operations needed to place and remove Safe Clearances and to perform temporary tag lift procedures.

7.2.5 Accepts and releases Safe Clearances issued to the position for the following conditions: line terminal clearances on tie lines and supply lines to and from outside utilities/agencies to establish safe working conditions within areas of high voltage equipment energized by these authorities.

7.2.6 In consultation with the PAI, ensures equipment is ready for service after work has been completed and the PAI has requested release of a Safe Clearance.

7.3 **Designated Representative to the Issuing Individual (DRII)**

7.3.1 Assures proper positioning of energy isolation devices to isolate hazardous energy sources, as well as draining and depressurizing fluids from equipment as directed by the II.

7.3.2 Places devices to allow for lock installation by the PAI

7.3.3 Places appropriate tags while verifying their integrity.

7.3.4 Shall not proceed with switching if any of the following conditions exist until resolved by the II.

7.3.4.1 The instruction is not clearly understood.

7.3.4.2 They believe the instruction is incorrect.

7.3.4.3 At any point in the operations, an unexpected condition could or does result.

7.3.4.4 A device is found in an unexpected position.

7.3.5 Reports to the II upon the start and completion of switching/clearing.

7.3.6 Performs operations as directed by the II.

7.3.7 Resolves questions that arise at any point during the switching/clearing sequence.

7.4 **Principal Authorized Individual (PAI)**

7.4.1 Requests and holds Safe Clearances.

7.4.2 Uses an Activity Hazard Analysis (AHA) to identify and analyze all hazardous energy sources for the scope of work to be performed.

7.4.3 Responsible for the Safe Clearance and coordinates work performed by personnel working under the Safe Clearance.

7.4.4 Verifies each isolation point is in the correct position and properly tagged.

7.4.5 Locks the isolation point and records the lock number on the clearance tag and Safe Clearance Points List.

7.4.6 Initials each isolation tag thereby accepting each point after verifying the point is properly positioned, tagged and locked.

7.4.7 Verifies every isolation point prior to accepting the clearance.

7.4.8 Responsible for the placement and removal of all physical barriers as required.

7.4.9 Responsible for verifying all hazardous energy is relieved, bled off or otherwise released.

7.4.10 Places their personal lock on the lockbox containing isolation lock keys.

7.4.11 Inspects the work area to ensure non-essential items have been removed from the system and the system components are operationally intact.

7.4.12 Assignment as PAI requires passing a written and oral test covering the material in SAF 385-1 administered by the RO or designee (designee shall be a Corps of Engineers employee and designated in writing by the RO).

7.5 **Authorized Individuals (AI)**

7.5.1 Same is PAI except, requests and holds Safe Clearances and Personal Lockouts for themselves only.

7.6 **Affected Person (AP)**

7.6.1 A person in an area, where an immediate or imminent threat of being injured by hazardous energy exists.

7.6.2 A person who performs servicing and maintenance within the physical boundaries of a safe clearance in accordance with this regulation and local HEC Program requirements.

7.6.3 Each Affected Person working under the group clearance shall sign the Safe Clearance Sign in Sheet verifying he or she fully understands the details of their job, the AHA, energy

isolation devices actuated, the locks and tags installed, and will then place their personal lock on the group lockbox.

7.6.4 Each AP shall confirm all hazardous energy has been isolated for their work activity prior to signing into the clearance.

7.6.5 No AP shall sign into the clearance prior to concurring with the isolation.

7.7 Incidental Persons (IP)

7.7.1 Individuals identified as Incidental Persons must understand the consequences of violations of the HEC Procedures.

7.8 Violations

7.8.1 All personnel shall report violations of the HEC procedures to the Responsible Official for documentation. Violators shall be subject to appropriate disciplinary action.

8.0 Training

8.1 ER 385-1-31 and HEC Program training shall be provided by the RO or a designated individual.

8.2 Employees involved with HEC procedures shall have initial training and must demonstrate adequate working knowledge of HEC policy and local programs and procedures prior to being authorized and identified to assume any of the associated roles.

8.3 Training verification, containing each employee's name and dates of training, is required for both initial training and retraining.

8.4 Training shall be provided to ensure that the purpose and function of Portland Districts' HEC Program is understood by all personnel

8.5 All training documentation shall be maintained at the project for at least two years.

8.6 ROs, PAI/AIs, and II/DRIIs shall be trained in:

8.6.1 Type and magnitude of energy present in the workplace

8.6.2 Recognizing hazardous energy sources.

8.6.3 Methods and means to isolate and control energy.

8.6.4 Limitation of tags

8.6.5 Requirements of the local HEC program.

8.6.6 Consequences of violations.

8.6.7 PAIs, IIs, and DRIIs shall be trained by an approved government representative and/or take the most comprehensive Vivid training module available. Additionally, they shall pass an oral exam administered by the RO or designee.

8.7 APs shall be trained in:

8.7.1 HEC procedures.

8.8.2 Recognizing HEC locks and tags.

8.7.3 Limitations of tags.

8.7.4 Understanding the prohibition against attempting to restart or re-energize a machine, circuit or any equipment that is removed from service by the implementation of an HEC procedure.

8.7.5 Consequence of violations.

8.7.6 APs shall be trained through Vivid or face to face briefings by an approved government representative, and followed by a written assessment.

8.8 Training for IPs shall include:

8.8.1 Instruction regarding HEC procedures and the prohibition against altering or removing a lockout or tag out device and attempting to restart, reenergize, or operate the machinery.

8.8.2 Consequences of violations.

8.8.3 Training for IP's may be accomplished through Vivid or face to face briefings by an approved government representative.

8.9 Retraining shall occur:

8.9.1 At least every 12 months and followed by a written assessment.

8.9.2 When a periodic inspection reveals deviations from procedures or inadequacies in knowledge or use of HEC procedures.

8.9.3 When an employee is in violation of HEC Procedures.

8.9.4 When there is a change in job assignment, hazards, or in the HEC Program.

9.0 Use of Locks and Tags.

9.1 Locks:

9.1.1 Are capable of withstanding the conditions to which they are exposed for the maximum time that the exposure is expected, and are substantial enough to prevent removal without the use of excessive force or unusual techniques (such as with the use of bolt cutters).

9.1.2 Are standardized within every facility and recognizable as an HEC lock.

91.3 Examples of personal locks and clearance locks are displayed in Attachment 2.2 and Attachment 3.

9.1.4 Each shall be uniquely marked for positive identification.

9.1.5 All spare keys for the isolation point locks shall be destroyed with the exception of one spare key for lock sets.

9.2 Personal Locks:

9.2.1 Shall be used by all personnel that are protected by the Safe Clearance.

9.2.2 Shall not be used for any other purpose besides individual personal protection.

9.2.3 Shall indicate the identity of the person who applied them.

9.2.4 Shall only be removed by the person who applied the lock.

9.2.5 Shall be used in conjunction with personal tags when locking/tagging out without a clearance.

9.2.6 Shall have no spare keys.

9.2.7 Lockboxes shall be kept in a secure location.

9.3 Tags:

9.3.1 Are standardized within every facility and have content and format equivalent to the example of ENG Form 1924, Caution Order Tag and the ENG Form 1925, Danger – Do Not Operate Tag, shown in Attachment 4 and Attachment 5.

9.3.2 Are constructed and printed so that exposure to weather conditions, wet or damp locations, or corrosive environments will not cause the tag to deteriorate or the message to become illegible.

9.3.3 Shall be attached by means which are non-reusable; self-locking; substantial enough to prevent inadvertent or accidental removal; non-releasable, with a minimum unlocking strength of no less than 50 pounds; and at least equivalent to a one-piece, all-environment-tolerant nylon cable tie.

9.3.4 Identify the person to whom the Safe Clearance is issued.

9.3.5 Tags shall only be removed by the II or DRII.

9.3.6 Tags shall never be bypassed, ignored or otherwise defeated.

9.4 Personal Tags:

9.4.1 Are standardized at each facility with the words "Danger – Do Not Operate."

9.4.2 Identify the person to whom the personal tag is issued.

9.4.3 No more than four personal tags per person are issued.

9.4.4 Are constructed and printed so that exposure to weather conditions, wet or damp locations, or corrosive environments will not cause the tag to deteriorate, or the message to become illegible.

9.4.5 Shall be attached by hand through self-locking means; substantial enough to prevent inadvertent or accidental removal; non-releasable, with a minimum unlocking strength of no less than 50 pounds; and at least equivalent to a one-piece, all-environment-tolerant nylon cable tie.

9.4.6 Examples of personal tags are displayed in Attachment 5.

9.5 Positive Controls in Public Access Areas:

9.5.1 In areas with public access, locks and other positive controls shall be used on the energy isolation devices.

9.5.2 Tags without a lock are not permitted in public access areas.

9.5.3 Refer to plant documentation for the application of lockout and tag out devices.

10.0 Hazardous Energy Control Procedures

10.1 Require an applicable/in-scope, written AHA for the work to be performed per EM 385-1-1. The AHA shall identify, analyze and provide controls for potential hazardous energy sources and be completed prior to conducting work (shall also address potential emergency situations). Additionally, the AHA shall identify the method of confirming the adequacy of the established isolation and absence of hazardous energy at the worksite. In the event Contractor personnel are completing an AHA for a clearance request, and do not have the knowledge to identify the methods of confirming the absence of hazardous energy, the PAI must include the method of testing on the AHA Every clearance request shall be accompanied by a specific AHA prepared by the person (GOV or contractor) performing the work activity. If the scope of work changes, a new AHA shall be written or the existing AHA shall be amended.

10.2 An orderly and systematic procedure to shut down and restore equipment shall be utilized to avoid any additional or increased hazards to personnel or equipment.

10.3 Any system operated by a remotely controlled source will be completely isolated so that it cannot be operated by the remote source or any other source.

10.4 Computer software, or any other type of programming, will not be used as isolation points.

10.5 Prior to starting any work on equipment under a Safe Clearance, isolation of all hazardous energy sources must be verified.

10.6 The PAI and/or AP, by signing either the Safe Clearance Order form or Safe Clearance Activity Log confirming the absence of hazardous energy, are acknowledging that verification/testing has been performed as described in the AHA or Activity Log and no hazardous energy was detected as of the date and time of their signature

11.0 Lockout/Tag out Requiring a Safe Clearance

11.1 Requests for a Safe Clearance:

11.1.1 The PAI/AI identifies the scope of work to be performed, develops the isolation and makes a request with sufficient time for the II to provide a Safe Clearance. The Safe Clearance Request Form will also denote the requirement for Temporary Protective Grounds (TPGs) and Isolation Points to be added after the clearance is accepted (on Request tags).

11.1.2 CENWP-OD HECP Form, Safe Clearance Request Form, or equivalent is used to formalize and document each isolation point and or TPG.

11.1.3 Requests for a Safe Clearance should be specific and provide adequate information to complete the Safe Clearance Order Sheet.

11.1.4 The PAI/AI and II shall ensure that the equipment to be placed under a Safe Clearance will be effectively isolated for the requested scope of the work to be performed.

11.1.5 Non-routine or complex clearances should be peer reviewed when possible.

11.2 Application of the Requested Safe Clearance

11.2.1 Upon approval of a Safe Clearance Request, the II shall:

11.2.2 Verify that the requesting person is qualified and authorized in the appropriate project supplement;

11.2.3 Ensure that the Safe Clearance correctly designates the positioning of all energy isolation devices specified in the Safe Clearance Points List and provides for locking and tagging all points accordingly;

11.2.4 Ensure that the proposed devices will be applied and removed in proper sequence.

11.2.5 Make all necessary arrangements for interruption of services, including notification of customers and coordination with appropriate agencies and other entities to ensure isolation of systems to be cleared; AND

11.2.6 Prepare the Safe Clearance and the associated Safe Clearance Tags.

11.2.7 If there are any questions regarding the completeness or correctness of the Safe Clearance, the questions shall be resolved before switching/clearing is started. If a question arises at any point during the switching/clearing sequence, it shall be resolved by the II or DRII and the PAI/AI before continuing with the switching/clearing.

11.3 The II or DRII performs the switching/clearing following these requirements:

11.3.1 The II authorizes the start and is notified at the completion of switching/clearing operations.

11.3.2 The equipment/system shall be isolated in accordance with the switching/clearing order.

11.3.3 Prior to the application of tags to energy isolating devices, all known potentially hazardous stored or residual energy shall be relieved, disconnected, restrained, or otherwise rendered safe.

11.3.4 Energy isolating devices needed to control energy to, or within the system shall be physically located and positioned in such a manner as to isolate energy sources and secure the isolation point in the safe position by placing a tag on the isolation devices.

11.3.5 Tags shall be affixed to each energy isolation device with a gang locking device at the same point where the lock will be attached by the PAI. The tag will clearly indicate that the operation or movement of the energy isolation devices from the position listed on the tag is prohibited.

11.3.6 Upon completion of the switching/clearing step, the DRII will initial each tag and write the time/date, and initial the Switching/Clearing Order.

11.3.7 If there is a re-accumulation of stored energy to a hazardous level, corrective measures shall be taken prior to the completion of switching/clearing.

11.3.8 The II shall provide the PAI/AI with the Safe Clearance Points List.

11.4 PAI/AI will verify and lock isolation points:

11.4.1 PAI/AI shall assure that energy isolation devices are properly positioned, and tagged.

11.4.2 The PAI/AI will lock the isolation point.

11.4.3 The PAI/AI will record the lock number on the clearance tag and Safe Clearance Points List.

11.4.4 PAI/AI will initial each isolation point tag upon verification of that device is in the proper position, tagged and locked.

11.4.5 The PAI/AI will place the isolation point lock key in a lockbox.

11.4.6 When all the isolation point keys have been placed into the lockbox the PAI/AI will place their personal lock onto the lockbox.

11.4.7 PAI signs the Safe Clearance Order in person or per telecom via the II.

11.5 Issuing a Safe Clearance

11.5.1 Upon PAI/AI acceptance of the Safe Clearance, the II issues a Safe Clearance to the PAI/AI. The following data will be entered in the station logbook: safe clearance number; purpose of the safe clearance; system to be cleared; date and military time of issue; name of the II; and name of PAI/AI receiving the Safe Clearance.

11.5.2 The preferred method of issuing Safe Clearances is in person.

11.5.3 TPGs shall be placed and documented on the Safe Clearance as appropriate.

11.5.4 The II shall remain cognizant of equipment condition and status while the Safe Clearance is in place.

11.5.5 If there is a re-accumulation of stored energy to a hazardous level, work shall stop until corrective measures have been taken.

11.5.6 Personnel being protected by the clearance shall:

11.5.6.1 Be briefed on HEC Procedures, understand the protection provided by the Safe Clearance, and be afforded the opportunity to verify proper application of locks and tags.

11.5.6.2 Obtain permission from the PAI prior to placing their personal lock on the lockbox and signing onto the Safe Clearance Sign-In Sheet.

11.5.6.3 Keep the PAI informed of any additional protection deemed necessary.

11.5.6.4 Prior to any AP starting work on equipment under a Safe Clearance, the PAI shall

review with all APs signing onto the clearance, the limits of the de-energized and isolated working area, including any unusual conditions.

11.5.6.4.1 At a minimum, a review of the Safe Clearance will take place at the job site with the PAI and AP(s) and shall include: review of AHA, work to be completed, inspection of the work site for hazardous energy, and a review of the isolation point status.

11.5.6.4.2 Each Affected Person working under the group clearance shall sign the Safe Clearance Sign in Sheet verifying he or she fully understands the details of their job, the energy isolation devices actuated, the locks and tags installed, and will then place their personal lock on the group lockbox.

11.5.6.4.3 No AP shall sign into the clearance without concurring that the isolation is adequate for their work.

11.5.6.5 After reviewing the Safe Clearance, the PAI and the first AP signing onto the clearance shall inspect and test the work site to verify the adequacy of the protection provided. The first AP shall concur with the method of inspection and be qualified to perform the testing.

11.5.6.5.1 The method of testing shall be described on the specific AHA for the associated clearance. Only the first AP to sign onto the clearance is required to test for the absence of hazardous energy with the PAI. The AP and PAI who perform the verification/testing shall sign and record this on the Safe Clearance Order.

11.5.6.5.2 The PAI and/or AP, by signing either the Safe Clearance Order form or Safe Clearance Activity Log confirming the absence of hazardous energy, are acknowledging that verification/testing has been performed as described in the AHA or Activity Log and no hazardous energy was detected as of the date and time of their signature.

11.5.6.5.3 The method of testing for isolation points added after the clearance has been accepted, or re-hung after a temporary lift, will be described and documented on the Safe Clearance Activity Log.

11.5.6.5.4 No other APs shall sign onto the Safe Clearance sign-in sheet prior to confirming completion of the verification/testing documentation.

11.5.6.5.5 Other APs are required to confirm the verification/testing has

been completed by observation of the first AP's signature on the Safe Clearance order. If isolation points have been, added or temp lifted and restored, confirmation of the testing signature is recorded on the Safe Clearance Activity sheet.

11.5.6.5.6 APs other than the first APs to sign onto the clearance may test the isolation provided it poses no risk to APs already working at the job site protected by the clearance. For example, testing for voltage with a volt meter doesn't add additional risk to APs already working on the circuit. Attempting to open a spill gate while other APs are working below it does increase the risk of danger to APs working below the spill gate.

11.5.6.5.7 Work that requires electrical energy to be isolated shall be made electrically safe via a Safe Clearance and tested as follows:

11.5.6.5.7.1 An adequately rated test instrument will be used to test each phase conductor or circuit part to verify it is de-energized.

11.5.6.5.7.2 Test each phase conductor or circuit part both phase-to-phase and phase-to-ground.

11.5.6.5.7.3 Before and after each test, determine that the test instrument is operating satisfactorily through verification on a known voltage source.

11.5.6.6 Keep the PAI informed of equipment conditions and the status of work.

11.5.6.7 For Contractors, see section 19.7 and 19.8.

11.6 Adding/Releasing Clearance Points

11.6.1 Adding a point:

11.6.1.1 If the addition of a new point is the result of a change in scope of work for which the original clearance was written, an updated AHA is required.

11.6.1.2 The PAI/AI requests the addition of Safe Clearance isolation points from the II.

11.6.1.3 PAI shall notify all personnel that specific isolation points will be added.

11.6.1.4 All personnel will sign off the Safe Clearance Sign-In Sheet and remove their personal locks from the lockbox.

11.6.1.5 DRII performs applicable switching/clearing procedures.

11.6.1.6 DRII tags the isolation points.

11.6.1.7 The PAI/AI shall verify and initial the additional isolation points for accuracy and assure that energy isolation devices are properly positioned, and tagged.

11.6.1.8 The PAI/AI shall record the lock number on the tag and Safe Clearance Points list.

11.6.1.9 The PAI/AI shall lock the isolation point and lock the key in the lockbox using a personal lock.

11.6.1.10 PAI/AI accepts the points from the II and documents the addition of isolation points in the Safe Clearance Activity Log.

11.6.1.11 The PAI shall document the method of testing the new isolation points on the Safe Clearance Activity Log in lieu of the AHA for points added after the clearance has been accepted.

11.6.1.12 PAI notifies personnel signing and locking back onto the Safe Clearance of the new boundaries.

11.6.1.13 The PAI shall review and test the new isolation with the APs per 11.5.6 or 19.7 and 19.8 for contractors.

11.6.2 Releasing a Point

11.6.2.1 The PAI/AI requests the release of Safe Clearance isolation points from the II.

11.6.2.2 PAI shall notify all personnel that specific isolation points will be released.

11.6.2.3 All personnel will sign off the Safe Clearance Sign-In Sheet and remove their personal locks from the lockbox.

11.6.2.4 PAI/AI will remove their personal lock from the lockbox only long enough to allow

for the removal of the AP's isolation locks.

11.6.2.5 DRII removes the tag and performs applicable switching procedures.

11.6.2.6 PAI/AI documents release of isolation points in the Safe Clearance Activity Log.

11.6.2.7 PAI notifies personnel signing and locking back onto the Safe Clearance of the new boundaries.

11.7 Temporary Protective Grounds (TPGs)

11.7.1 Protective grounds can only be placed after a clearance is in place and has been accepted by the PAI/AI.

11.7.2 The National Electrical Safety Code shall be used as a guide in grounding requirements and procedures.

11.7.3 Locks are not required on TPGs.

11.7.4 TPGs shall be tracked and administered on the Clearance Placement Order Form, Hanging Removal Record Form and the Safe Clearance Order Form for accountability and personal safety.

11.7.4.1 Safe Clearance is initially accepted and documented on the Safe Clearance Order by the PAI/AI and issued by the II.

11.7.4.2 PAI/AI notifies II that grounds will be placed.

11.7.4.3 Personnel hanging TPGs will verify the absence of hazardous energy per 11.5.6 sign onto the Safe Clearance Sign-In Sheet and place their personal lock on the lockbox.

11.7.4.4 TPGs are then placed by an electrically qualified journeyman or a trainee under the direct supervision of an electrically qualified journeyman.

11.7.4.5 Using the Safe Clearance Placement order the II/DRII places the appropriate TPG tag (Attachment 5.5) on each individual TPG immediately after all TPGs are placed and initials each tag.

11.7.4.6 The PAI will initial each additional TPG tag upon verification of that TPGs placement and condition.

11.7.4.7 The PAI/AI will accept the TPG points and document their placement in the Safe Clearance Activity Log.

11.7.4.8 The II will record TPGs in the Station Logbook, Safe Clearance Order, and Hanging Removal Record form.

11.7.4.9 The system is now considered safe for work to be performed.

11.7.5 TPGs are removed prior to the release of the associated Safe Clearance, as per the following:

11.7.5.1 PAI/AI requests the release of TPG tags.

11.7.5.2 All personnel, with the exception of personnel removing TPGs, will sign off the Safe Clearance and remove their personal lock from the lockbox.

11.7.5.3 Using the Removal Record form the II/DRII removes all TPG tags.

11.7.5.4 Immediately after tags are removed, the TPGs are removed by an electrically qualified journeyman or a trainee under the direct supervision of an electrically qualified journeyman.

11.7.5.5 TPG removal shall be documented by the PAI on the Safe Clearance Activity Log

11.7.5.6 The II shall document the removal of the grounds on the Hanging Removal Record form, Safe Clearance Order, and Station Logbook.

11.7.5.7 The Safe Clearance can then be re-accepted or released as the need may be.

11.8 Temporary Removal of Locks and Tags (Temp Lifts)

11.8.1 In situations where the PAI/AI requests temporary removal of locks and tags from the energy isolating devices and energizing of the system for testing or repositioning purposes, the action must be fully coordinated in advance with the II.

11.8.2 If more than one Safe Clearance is issued or there are overlapping Safe Clearances, the PAI/AI shall coordinate the action with all PAI/AIs.

11.8.3 A Temp Lift Order will be issued by the II once the following conditions have been met

11.8.3.1 Clear the system of tools and equipment.

11.8.3.2 PAI shall notify all personnel that specific isolation locks and tags will be removed.

11.8.3.3 All personnel will sign off the Safe Clearance Sign-In Sheet and remove their personal lock from the lockbox.

11.8.4 PAI/AI will remove their personal lock from the lockbox only long enough to allow for the removal of the isolation lock keys required to perform the testing requested.

11.8.5 The II/DRII will remove the isolation point Clearance Tags and line out the initials.

11.8.6 The temporarily removed locks and tags shall be stored in the PAI's lockbox.

11.8.7 Temporary Lifts shall be documented on the Safe Clearance Activity Log by the PAI.

11.8.8 The II will record the temporary lift on the Hanging Removal Record form.

11.8.9 Only the personnel authorized by the PAI will then sign onto the Safe Clearance Sign-In Sheet and re-hang their personal lock on the lockbox.

11.8.10 Personnel will then perform the testing as requested.

11.8.11 Upon completion of the testing, the personnel will sign off the Safe Clearance Sign-In Sheet and remove their personal lock form the lockbox.

11.8.12 PAI/AI will remove their personal lock from the lockbox only long enough to allow the II or DRII to retrieve the removed tags.

11.8.13 The II or DRII will again conduct switching/clearing; reapply appropriate HEC components allowing for continued service or maintenance as prescribed in the Temp Lift Order and initial the tags again.

11.8.14 The PAI/AI shall assure that energy isolation devices are properly positioned prior to initialing the tag and locking the isolation point.

11.8.15 The PAI/AI will place the isolation point lock key into the lockbox and lock the box with their personal lock.

11.8.16 The PAI/AI shall contact the II for acceptance of the affected Safe Clearance protection points. This shall be documented in the Safe Clearance Activity Log by the

PAI and the Clearance Hanging and Removal Record by the II.

11.8.17 The PAI shall document the method of testing for the replaced isolation points on the Safe Clearance Activity Log in lieu of the AHA

11.8.18 The PAI shall review and test the new isolation with the APs per 11.5.6 or 19.7 and 19.8 for contractors.

11.8.19 PAI will give permission to the appropriate personnel to allow servicing and maintenance to continue.

11.8.20 Personnel must re-hang their personal lock and sign onto the Safe Clearance Sign-In Sheet.

11.9 Completion of Work: Before isolation locks and tags are removed and energy is restored to the system, the PAI/AI will ensure the following actions occur and are communicated to the II.

11.9.1 The work area shall be inspected to assure non-essential items/tools have been removed from the system and the system components are operationally intact.

11.9.2 TPGs shall be released.

11.9.3 All personnel shall sign off the Safe Clearance Sign-In Sheet and remove their personal lock from the lockbox.

11.10 Releasing a Clearance

11.10.1 When releasing a Safe Clearance, the PAI/AI shall:

11.10.1.1 Report to the II that all work associated with their Safe Clearance is complete.

11.10.1.2 Remove their lock from the lockbox only after ensuring all other personal locks have been removed and all personnel have signed off the Safe Clearance Sign-In Sheet.

11.10.1.3 Remove all isolation point locks.

11.10.1.4 Return Work Permit to the II or the DRII and release the clearance.

11.10.2 When releasing a Safe Clearance, the II or DRII shall complete the following.

11.10.2.1 Verify all personnel have signed off the clearance.

11.10.2.2 Remove isolation point tags and reposition equipment as detailed in the Switching/Clearing Order.

11.10.2.3 The II shall enter the following information in the Station Logbook: Safe Clearance number; date and military time of release; and names of individuals issuing and receiving the release authorization. Upon releasing a Safe Clearance, the word "RELEASED" shall be written or stamped across the corresponding log.

11.10.2.4 Retain Safe Clearance documentation in accordance with record retention regulation.

12.0 Multi-Shift Clearance

12.1 During shift changes, the Safe Clearance integrity shall be maintained as follows:

12.1.1 The off-going PAI shall inspect the worksite and communicate with workers to assess the current status of the personnel, equipment, and work covered by the Safe Clearance.

12.1.2 The off-going PAI shall brief the on-coming PAI on the current personnel, equipment, and work status.

12.1.3 The on-coming PAI shall place their personal lock on the lockbox.

12.1.4 The on-coming PAI shall then review the Safe Clearance and inspect the worksite to ensure the Safe Clearance is adequate.

12.1.5 When the on-coming PAI is satisfied with the integrity of the Safe Clearance, they will then accept the responsibility for the Safe Clearance by documenting it in the Safe Clearance Activity Log.

12.1.6 The off-going PAI shall release responsibility to the on-coming PAI by documenting it in the Safe Clearance Activity Log.

12.1.7 The off-going PAI shall then remove their personal lock from the lockbox.

12.1.8 If there is a question of the integrity or status of the Safe Clearance, personnel, or work being performed, the off-going PAI shall retain responsibility and work will stop until the situation is resolved.

13.0 Transfer of a Clearance

13.1 Transfers of a clearance are permitted from PAI/AI to PAI/AI.

13.2 Documentation of the transfer is completed by the II and shall be performed in the following manner.

13.2.1 If the PAI/AI holding a Safe Clearance plans to leave the facility for an extended period of time or needs to transfer the responsibility of a Safe Clearance to another PAI/AI, this intention must be stated to the II.

13.2.2 The oncoming PAI/AI must understand the limits of the Safe Clearance and any special hazards that exist in connection with the work to be performed under the Safe Clearance.

13.2.3 The oncoming PAI/AI shall then place their personal lock on the lockbox.

13.2.4 The oncoming PAI/AI shall review the Safe Clearance and shall assure that energy isolation devices are properly positioned, locked and tagged.

13.2.5 The oncoming PAI/AI will initial each isolation point tag upon verification of that device's position and condition.

13.2.6 After the oncoming PAI/AI has documented the transfer in the Safe Clearance Activity Log and signed the transfer block of the Safe Clearance Order to accept the Safe Clearance, the II will issue the Safe Clearance to the oncoming PAI/AI.

13.2.7 The outgoing PAI/AI shall sign the Safe Clearance Order to transfer the Safe Clearance to the oncoming PAI/AI and shall remove their personal lock from the lockbox.

13.2.8 The II shall record the following information in the Station Logbook: Safe Clearance number; date and military time of transfer; and names of individuals transferring the Safe Clearance. Upon transfer of a Safe Clearance, the word "TRANSFERRED" shall be stamped across the corresponding log.

14.0 Personal Lockout (Lockout/Tag out without a Clearance)

14.1 The Responsible Official shall designate certain equipment (in writing) which may be removed from service using a Personal Lockout. ***Personal Locks and tags*** shall be used when removing equipment from service under these conditions. Personal Lockouts fall under the same requirements as do Safe Clearances and can only be used by Authorized Individuals.

14.2 Personal locks and tags shall be used when removing the designated equipment from service.

14.3 Personal Lockout must be approved and documented in the station log by the II, including the start time, end time and date. The use of this process is permitted only when the following criteria are met.

14.3.1 An AHA shall be prepared and approved that identifies all sources of hazardous energy.

14.3.2 An approved, step-by-step procedure, specific to the piece of equipment being removed from service for multi-point isolation.

14.3.3 The employee is authorized to work only under their own personal locks and tags.

14.3.4 Equipment is easily isolated such that the employee can exercise close control over the isolation points.

14.3.5 Equipment would not adversely affect the mission.

14.3.6 Equipment is rated at 480-volts or lower.

14.3.7 The operation or work to be accomplished is limited to one shift.

14.3.8 A maximum of four isolation points is allowed.

14.3.9 The equipment has no potential for stored or residual energy or accumulation of stored energy after shut down which could endanger employees.

14.3.10 The servicing or maintenance does not create hazards for other employees.

14.3.11 Personal Lockout shall be recorded in the Station Logbook.

14.3.12 Verification of removal of hazardous energy is required.

15.0 Issuing Individual (II) Clearance

15.1 II Clearances are temporary, generic clearances not specifically issued to an Authorized Individual. As such, the issuing and releasing responsibility rests with the II on shift.

15.2 II Clearances are to be utilized to facilitate the protection of equipment and project personnel due to an abnormal equipment condition.

15.3 No maintenance or service shall be performed under the protection of an II Clearance.

15.4 II Clearances are not to be transferred and are only to be left in place until a Safe Clearance can be put in place.

16.0 Interconnect Orders

16.1 When work requires de-energizing equipment that is under the control of an outside agency to provide electrical safety to USACE personnel; employees shall follow the guidelines defined in OSHA Regulation, 29 CFR 1910.269(m)(3).

16.2 The Portland District and its partnering agencies understand and agree that the agency of ownership will conduct the repositioning of their equipment and place tags and or locks on the respective equipment to ensure the safety of the personnel conducting the work.

16.3 The Portland District and its partnering agencies agree that verbally communicating the lockout – tag out identifiers (numbers) to the individual to whom it is issued will satisfy the requirements of safe clearance.

16.4 The Portland District and its partnering agencies further understand and agree that either agency may elect to grant a partnering agency access to their equipment for the purpose of hanging locks and tags but that neither agency is mandated to allow this provision.

16.5 Interconnect Clearance Procedure for Corps Work:

16.5.1 This procedure is for **Transmission lines only.**

16.5.2 If the Bonneville Power Administration (BPA) desires to work inside the powerhouse (equipment other than transmission lines):

16.5.2.1 Portland District Vivid HECP training is required.

16.5.2.2 BPA personnel shall lock onto and sign into our clearance for any work requiring a clearance other than line clearances.

16.5.3 PAI shall be authorized to hold clearances.

16.5.4 Outage is coordinated through the Operations Manager.

16.5.5 Line outage requests require notice, 75 days in advance of the month the outage will occur in.

16.5.6 II can schedule BPA clearances if the Operations Manager is not available.

16.5.7 The Portland District PAI will complete a Clearance request based on the work and AHA.

16.5.8 The Portland District PAI will submit the clearance request to the II.

16.5.9 II will prepare a Portland District Clearance with BPAs, and any Corps isolation points.

16.5.10 The II will coordinate with the dispatcher to unload and de-energize the line.

16.5.11 BPA will tag and lock (wherever possible) the requested isolation points.

16.5.12 The dispatcher will issue the clearance to the II.

16.5.13 This will be documented in the station logbook noting the dispatcher's name, date, time, and clearance number in red.

16.5.14 After BPAs clearance is issued to the II.

16.5.15Place tag(s) with BPA clearance number on System Control Console, (SCC) or equivalent at the appropriate line.

16.5.16 II Initials on Clearance Placement Order for BPA points (where the DRII initials for in house points).

16.5.17 The II initials represent checking the points at BPA via the dispatcher.

16.5.18 PAI checks and locks in house clearance points (if there are any).

16.5.19 PAI verifies the II has initialed for any points at BPA while checking tags.

16.5.20 PAI verifies tag(s) on SCC or equivalent for BPA points.

16.5.21 The above step verifies the points at BPA have been issued to the II.

16.5.22 The II will issue the clearance to the PAI.

16.5.23 Logged with the appropriate red stamp.

16.5.24 The PAI shall review and test the new isolation with the APs per 11.5.6 or 19.7 and 19.8 for contractors.

16.5.25 PAI releases clearance to II when work is complete.

16.5.26 Logged with the appropriate green stamp.

16.5.27 II releases clearance to BPAs dispatcher.

16.5.28 This will be documented in the station logbook noting the dispatcher's name, date, time, and clearance number in green.

16.5.29 Tags and locks are removed.

16.5.30 II and dispatcher coordinate to restore line.

16.6 Interconnect Clearance Procedures for BPA Work

16.6.1 This procedure is for **Transmission lines only.**

16.6.2 If BPA desires to work inside the powerhouse (equipment other than transmission lines):

16.6.2.1 Portland District Vivid HECP training is required.

16.6.2.2 BPA personnel shall lock onto and sign into our clearance for any work requiring a clearance other than line clearances.

16.6.3 Requires a Corps of Engineers PAI.

16.6.4 Scheduled through the Operations Manager.

16.6.5 Operations Manager will arrange for a Corps PAI.

16.6.6 The PAI will hold a Portland District HECP clearance for the points requested by BPA.

16.6.7 The II can schedule BPA clearances if the Operations Manager is not available.

16.6.8 The Portland District PAI will complete a Clearance request based on the request from BPA. A copy of BPA's outage shall be attached.

16.6.9 The II will write the Clearance to be placed by a DRII and second checked and locked by the PAI.

16.6.10 The clearance will also indicate who the Portland District PAI is.

16.6.11 This will be documented on the clearance and all tags as, "BPA Dispatcher (PAI)" Example, BPA Dispatcher (John Doe).

16.6.12 The II and BPA dispatcher coordinate to unload and de-energize the line.

16.6.13 DRII tags any isolation points at the Corps facility.

16.6.14 PAI checks and locks clearance isolation points.

16.6.15 The Clearance is issued to the PAI.

16.6.16 Logged in the station logbook with the appropriate red stamp.

16.6.17 If the ground switch is to be closed, it can be closed at this time:

16.6.17.1.Logged with the appropriate Red stamp.

16.6.17.2 II will sign in and lock onto the PAIs box.

16.6.18 The II lock remains on the box until the dispatcher releases the clearance.

16.6.19 II will communicate to BPA's

dispatcher: 16.6.19.1The Clearance is in

place. 16.6.19.2The Clearance Number.

16.6.19.3 Equipment State for **only the equipment affecting BPA.**

16.6.20 BPA's dispatcher will read back the communication to the II.

16.6.21 The Clearance will be issued to the dispatcher over the telephone by the II.

16.6.22 This will be documented in the station logbook noting the dispatcher's name, the date, time and clearance number in red.

16.6.23 Once BPA's work is complete:

16.6.23.1 Dispatcher will verbally release the Clearance to the II.

16.6.23.2This will be documented in the station logbook noting the dispatcher's name, date, time, and clearance number in green.

16.6.23.3 The II will notify the PAI that BPA has released the clearance.

16.6.23.4The II will sign off and remove the IIs lock from the lockbox.

16.6.24 If the ground switch had been closed:

16.6.24.1 The PAI shall release the ground switch tag.

16.6.24.2 The ground switch shall be opened prior to releasing the clearance.

16.6.25 Portland Districts PAI releases the clearance.

16.6.26 Logged with the appropriate green stamp.

16.6.27 Clearance can be picked up.

16.6.28 Equipment restored as coordinated with the dispatcher.

16.7 Hold Orders.

16.7.1 Only applies for BPA work. Corps employees are not authorized to work under HOLD ORDERS.

16.7.2 This procedure is for **Transmission lines only.**

16.7.3 The line remains energized when a Hold Order is in place.

16.7.4 HOLD ORDER - Assurance given to a worker by a System Dispatcher or Substation Operator that if a transmission line is de-energized, (for any reason) it will not be ordered energized until that worker reports the crew in the clear.

16.7.5 TERMINAL HOLD - is a formal assurance of non-reclosure at the Local Terminal or Terminals of an inter-connecting circuit provided by the Local System Dispatcher (or powerhouse Operator) to a requesting Dispatcher. The Terminal Hold assures the requesting Dispatcher that the terminal or source on "Hold" has sufficient relays in service to provide protection in the event of a fault; and, once tripped out of service, will not be energized, automatically or manually until the Dispatcher receiving the Terminal Hold has advised that all personnel and materials are in the clear and it is safe to energize.

16.7.5.1 A Hold Order is given on the entire line. A Terminal Hold is only given to a Dispatcher or PH Operator from one end and is used in conjunction with other tagging to issue a Hold on the entire line to a worker.

16.7.6 A clearance is used in place of a Hold order for Corps personnel.

16.7.7 Hold Order Procedure:

16.7.7.1 Scheduled through Operations Manager.

16.7.7.2 The II can schedule Terminal Hold Orders if the Operations Manager is not available.

16.7.7.3 II/DRII hangs the "HOLD ORDER" on all Control Points. Tags shall be placed on all control points including GDACS screens. This includes any station service feed on the line. See Attachment 5.8 for example of a HOLD ORDER Tag.

16.7.7.4 BPA's dispatcher will coordinate with the II.

16.7.7.5 II logs the Terminal Hold Order in the Station Log.

16.7.7.6 The Logbook entry shall be in blue and contain the following:

16.7.7.6.1 The line the hold order is on.

16.7.7.6.2 The requester ex. "Dittmer Generation Dispatcher".

16.7.7.6.3 Direct phone number of the requester.

16.7.7.6.4 Reason.

16.7.7.6.5 Stipulation, do not re-energize until after directed by the dispatcher.

16.7.7.7 BPA expects that the line relaying is cut in and operational, no relay maintenance is allowed during this time.

16.7.7.8 Automatic re-closers are cut out.

16.7.7.9 The line is not re-energized after a trip.

16.7.9.9.1 Only re-energized after directed by BPAs dispatcher.

16.7.9.9.2 Not necessary to clear the tag after dispatcher requests re-energization.

16.7.7.10 Logging Requirements for re-energization:

16.7.9.10.1 If directed to re-energize with a Terminal Hold Order in place.

16.7.9.10.2Log in the station log in Blue, "Directed to re-energize line __ with the Hold Order in place by _____."

16.7.7.11 When releasing a Hold Order:

16.7.9.11.1 Release the Hold Order when directed by the Dispatcher.

16.7.9.11.2The Dispatcher will make a statement, "Work is complete, men and equipment are clear and I am releasing my Terminal Hold on line ___."

16.7.9.11.3Log in the station logbook in blue, "The line the Terminal Hold Order is released on Line ____ by _____."

17.0 Unattended or Remote Stations

17.1 Responsibilities:

17.1.1 The II normally controls the proper clearing, locking, and tagging of equipment in accordance with HEC procedures.

17.1.2 In an emergency, the RO may designate the same person to fill the role of both DRII and PAI/AI.

17.1.3 For stations and components not directly under a facility operator's (II) control, the AI/PAI performing the work will perform switching and hang locks/tags for the clearance. An II shall still maintain administrative documentation for the clearance by generating all associated paperwork, tracking clearance status, and logging the issuance and release of clearances. For the purposes of this method of work control, facilities not directly under a facility operator's control may include USACE facilities operated by a contractor or other external agency, parks, or administrative buildings. These facilities shall be designated in writing in a memo or locally approved procedure.

17.2 The II shall be notified immediately prior to and upon completion of the switching/clearing operations.

17.3 For stations not under a facility operator's control, the AI/PAI shall coordinate with the facility's impacted operations personnel to position components and verify system status. After the component positions are verified, the PAI shall affix tags to the components and initial for hanging.

17.4 The PAI/AI requesting the Safe Clearance shall place isolation locks to secure each energy isolation device and initial each isolation point tag upon verification of that device's proper position and condition.

17.5 The PAI shall review and test the new isolation with the APs per 11.5.6 or 19.7 and 19.8 for contractors.

17.6 After completion of the work, the II shall be informed of the time the Safe Clearance was released. The PAI shall remove locks and tags as appropriate, and coordinate with the DRII or facility operators to ensure proper system restoration.

17.7 The II shall enter the following info in the Station Logbook: Safe Clearance number; date and military time of release; and names of individuals issuing and receiving the release authorization. Upon releasing a Safe Clearance, the word "RELEASED" shall be written or stamped across the corresponding log entries in a distinct color.

17.8 Retain Safe Clearance documentation for a minimum of two years from the date of release.

18.0 Caution Orders

18.1 Caution Orders shall be reviewed by the RO or their designee at least every six months to ensure the caution order is still needed. If used for more than one year, the caution order shall be removed and operating procedures shall be developed to reflect current operational conditions.

18.2 Caution orders shall not be used to protect personnel.

18.3 Caution orders must be approved and documented by the II.

18.4 Caution orders are issued with direct attention to abnormal or unusual conditions, or to special operating instructions to be followed.

18.5 Each caution order shall be assigned an identification number.

18.6 Caution orders will be logged in the station logbook.

18.7 ENG Form 1928, "Caution Order" Sheet, will be prepared for each caution order issued. This will supplement the Station Logbook entry at those projects maintaining Station Logbooks and provide the necessary project records at other projects. Records shall be maintained for a minimum of two years.

18.8 ENG Form 1924, Caution Order Tag, will be properly completed and attached to appropriate control devices and equipment.

19.0 Additional Items Concerning Contractors or Non-Project Personnel

19.1 SAF 385-1 shall be used for lockout/tag out of all equipment connected to government-owned equipment. An approved contractor HECP can be used in addition to, but never in lieu of, the Corps

of Engineers HECP.

19.2 When USACE employees are on a site that is controlled by a contractor and are affected by the contractor-managed HECP, they shall comply with the contractors HECP. The Contractors HECP shall be developed IAW 29 CFR 1910.147, ANSI Z244.1, and ANSI A10.44.

19.3 When non-project personnel perform construction or maintenance at government-operated facilities and are exposed to hazardous energy, the non-project personnel shall also be trained in and protected by SAF 385-1.

19.4 If a non-USACE entity desires to implement their HEC procedure in addition to SAF 385-1, the non-USACE entity shall implement their HEC procedure in coordination with the local Issuing Individual. The non-USACE entity will provide their HEC program and procedures to the Government Designated Authority (GDA) as a submittal, which must be accepted by the GDA prior to beginning work.

19.4.1 At a minimum, Contractors shall submit a letter of acknowledgment and compliance to the Portland District HEC Program, CENWP-OD-SAF-385-1 (2019) to the GDA prior to beginning work.

19.5 When Safe Clearances are required to safely perform the work, the PAI will discuss the HEC Program requirements with the non-project representative to ensure they understand the hazards, procedures, and limits of the Safe Clearance. The non-project representative shall review the plan for accomplishing the work with the PAI in such detail as may be necessary for them to determine the hazardous energy isolation boundaries.

19.6 Requests for USACE Safe Clearances.

19.6.1 The request shall be made with sufficient information and advanced notice to ensure that the PAI can accommodate the request. The request must be made in writing, electronic mail is an acceptable written format. The written request must include the following information:

- Contract number
- Contractor name
- Specific equipment and locations of work to be performed so that appropriate clearance boundaries can be identified by the PAI/II
- Date and time of the requested outage

- Duration of outage
- Description of work to be performed in sufficient detail for the PAI/II to determine appropriate clearance points
- Activity / Job Hazard Analysis (AHA/JHA) for work to be completed under outage; the AHA is considered a living document, as work progresses additional AHAs or revisions may be necessary to capture work progression, these shall be submitted by the Contractor and approved by the GDA prior to commencing new work; the GDA will not approve new work under an existing clearance until the clearance boundary has been confirmed as adequate. The Construction Branch is responsible for and approves AHAs for contract work. Reference 10.1 for additional information regarding AHA requirements.
- The name of the non-project representative who will be responsible for the work and safety of the job.

19.6.2 All clearance requests must be made at least 24 hours in advance.

19.6.2.1 Clearance requests involving a generator unit outage require written requests at least 45 days prior to the Monday of the week the outage is to occur.

19.6.2.2 Clearance requests involving line outages require written requests at least 75 days prior to the month the outage is to occur.

19.7 The PAI holding the Safe Clearance shall review with the superintendent/work leader the limits of the de-energized and isolated working area, including any unusual conditions. This review will occur at the work site after the clearance is in place and will include a review of the limits of the de-energized and isolated working area, AHA, isolation points, work to be completed, and unusual conditions. Upon request, the PAI holding the Safe Clearance will walk the isolation as part of the review, review any associated drawings, hand over hand the system, and/or provide the station O&M manual.

19.7.1 Each AP is responsible for reviewing the clearance with the PAI or Superintendent/work leader prior to signing on to the Safe Clearance. This review will occur at the work site and will include a review of the limits of the de-energized and isolated working area, AHA, isolation points, work to be completed, and any unusual conditions. Upon the request of any AP signing onto the clearance, the PAI holding the Safe Clearance will walk the isolation as part of the review, review associated drawings, hand over hand the system, and/or provide the station O&M manual.

19.7.2 A PAI cannot authorize a Superintendent/Work Leader to sign on to a clearance via telephone or radio.

19.7.3 Each Affected Person working under the group clearance shall sign the Safe Clearance Sign in Sheet verifying he or she fully understands the details of their job, the energy isolation devices actuated, the locks and tags installed, and will then place their personal lock on the group lockbox.

19.8 After the Safe Clearance is issued, the PAI and the first AP signing onto the clearance shall inspect and test the work site to verify the adequacy of the protection provided. The first AP shall concur with the method of inspection and be qualified to perform the testing.

19.8.1 The method of testing shall be described on the specific AHA for the associated clearance. Only the first AP to sign onto the clearance is required to test for the absence of hazardous energy with the PAI. The AP and PAI who perform the verification/testing shall sign and record this on the Safe Clearance Order.

19.8.2 The PAI and/or AP, by signing either the Safe Clearance Order form or Safe Clearance Activity Log confirming the absence of hazardous energy, are acknowledging that verification/testing has been performed as described in the AHA or Activity Log and no hazardous energy was detected as of the date and time of their signature

19.8.3 The method of testing for isolation points added after the clearance is accepted, or re-hung after a temporary lift, will be described on the Safe Clearance Activity Log.

19.8.4 No other APs shall sign onto the Safe Clearance sign-in sheet prior to confirming the completion of the verification/testing documentation.

19.8.5 Other APs are required to confirm the verification/testing has been completed by observation of the AP's signature on the Safe Clearance order. If isolation points have been temp lifted and restored, confirmation of the testing signature is recorded on the Safe Clearance Activity sheet.

19.8.6 APs other than the first APs to sign onto the clearance may test the isolation provided it poses no risk to APs already working at the job site protected by the clearance. For example, testing for voltage with a voltmeter doesn't add additional risk to AP's already working on the circuit. Attempting to open a spill gate while other APs are working below it does increase the risk of danger to APs working below the spill gate.

19.8.7 Work that requires electrical energy to be isolated shall be made electrically safe via a Safe Clearance and tested as follows:

19.8.7.1 An adequately rated test instrument will be used to test each phase conductor or circuit part to verify it is de-energized.

19.8.7.2 Test each phase conductor or circuit part both phase-to-phase and phase-to-ground.

19.8.7.3 Before and after each test, determine that the test instrument is operating satisfactorily through verification on a known voltage source.

19.9 Upon completion of work, the PAI shall concur with non-project personnel that the equipment is ready to be returned to service or commissioned.

19.10 All Contractor employees involved in any HEC Program are required to complete the USACE Portland District HECP Training. Training must be completed annually. Each employee must have an up to date certificate when working under a clearance.

20.0 Non-Standard Maintenance.

20.1 Non-standard equipment is that which is not directly associated with the generation of hydro-power or the flow of water from Portland District Projects. Such equipment includes but is not limited to elevators, escalators, hoists, and other such equipment which require being energized to perform certain required maintenance functions.

20.2 When manufacturer's specifications and/or industry-recognized governing standards (e.g. ANSI and ASME) define the operation, inspection, testing, and maintenance of specific equipment the specification or governing standard may be used in lieu of the district HECP unless otherwise directed by the RO or his designated representative.

21.0 Abnormal Release and Removal

21.1 Abnormal Removal of Personal Locks. When the individual who applied a personal lock is not available to remove it due to extraordinary circumstances, the individual's immediate supervisor shall assume full responsibility for the removal of the personal lock after performing the following actions.

21.1.1 Verify that the individual who applied the personal lock is not at the facility.

21.1.2 Make all reasonable efforts to contact the individual to inform them that their personal lock will be removed.

21.1.3 Ensure that the individual will be informed of the removal before they resume work at that facility by signing the Abnormal Removal of Personal Lock Form.

21.1.4 Obtain written authorization from the RO or their Designee to remove the individual's personal lock.

21.1.5 Documentation provided in the Abnormal Removal of Personal Lock Form must be filled in and attached to the Safe Clearance as a permanent record of the action.

21.2 Abnormal Release of a Safe Clearance. When, due to extraordinary circumstances, it is not possible for the PAI/AI to release the Safe Clearance, the PAI/AI's Immediate Supervisor shall assume full responsibility for the release of the Safe Clearance and removal of their personal lock after performing the following actions.

21.2.1 Verify that the PAI/AI who holds the Safe Clearance and applied their personal lock onto the lockbox is not at the facility.

21.2.2 Make all reasonable efforts to contact the PAI/AI to inform them that their Safe Clearance and personal lock will be removed.

21.2.3 Ensure that the PAI/AI will be informed of the removal before they resume work at that facility by signing the Abnormal Release of Safe Clearance Form.

21.2.4 Obtain written authorization from the RO or their designee to release the Safe Clearance and remove the PAI/AI's personal lock.

21.2.5 Inspected the work area to assure non-essential items/tools have been removed from the system and the system components are operationally intact.

21.2.6 Verify TPGs have been released.

21.2.7 Ensure all personnel have signed off the Safe Clearance Sign-In Sheet and have removed their personal locks from the lockbox.

21.2.8 Documentation provided in the Abnormal Release of Safe Clearance Form must be filled in and attached to the Safe Clearance as a permanent record of the action.

22.0 Records and Measurements

22.1 All training records, clearance forms, AHAs, and work permits shall be kept on file for a minimum of two years. Self-assessment/inspection reports shall be kept on file for a minimum of five years.

23.0 Inspection and Program Review

23.1 Periodic inspections shall be designed and conducted to ensure all requirements of the HEC Program are being followed, to identify and correct any weaknesses (or potential weaknesses) in the program or procedures, in employee training, or in how the requirements are enforced. See Attachment 7.

23.2 The Responsible Official shall ensure the periodic inspections are performed.

23.3 Periodic inspections shall be performed **at least annually** by individual(s) knowledgeable in HEC Program and Procedures, to include a Qualified Person. Personnel internal to the facility may conduct the inspection one year and personnel external to the facility shall conduct the inspection the next year (peer review). The person using the HEC procedure cannot inspect the procedure.

23.4 Periodic inspections of HEC procedures shall cover at least one lockout/tag out without a clearance and a safe clearance in progress, the procedure details and include a review between the inspectors and individuals involved in the safe clearance being inspected.

23.5 Inspections shall be documented (date, persons involved, results) and identified deficiencies noted. Corrective actions taken to improve the program or employee knowledge of the program must include how any revision of specific procedures or a general change is communicated to the workers.

The proponent office for this document is the Operations Division Technical Operations Branch staff and any questions or comments should be directed to this office at:

CENWP-ODT
333 SW First Ave
Portland, OR 97204
Phone: (503) 808 - 4301
FAX: (503) 808 - 4329

ANDERSON.KYMBERLY.C.1254213949

Digitally signed by ANDERSON.KYMBERLY.C.1254213949
Date: 2023.04.10 08:16:57 -07'00'

Kymberly Anderson, P.G.
Chief, Operations Division

10 Attachments

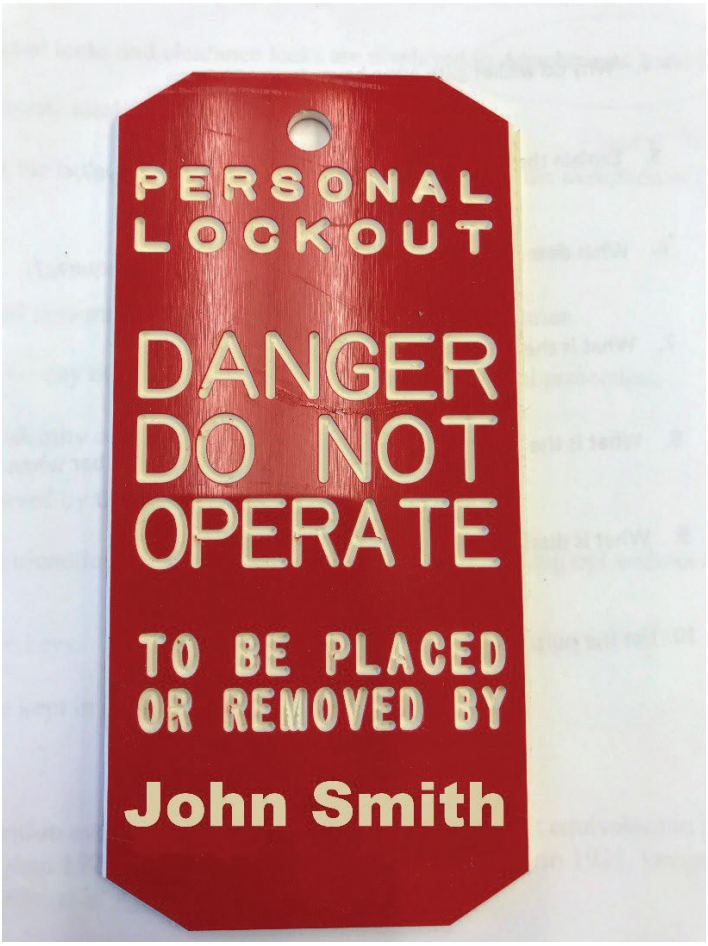
1. Acronyms
2. Sample Personal Locks and Tags
3. Sample Clearance Locks
4. Sample ENG Form 1924, Caution Order Tag
5. Sample ENG Form 1925, Safe Clearance Tag
6. Sample ENG Form 1928, Caution Order
7. CENWP-OD HECP Forms
   - Form 1, Activity Hazardous Analysis
   - Form 2, Safe Clearance Request
   - Form 3, Clearance Placement Order
   - Form 4, Clearance Placement Order -Working Copy
   - Form 5, Safe Clearance Points List
   - Form 6, Safe Clearance Order
   - Form 7, Work Permit Cover Label
   - Form 8, Safe Clearance Point Status Summary
   - Form 9, Safe Clearance Sign In Sheet
   - Form 10, Safe Clearance Activity Log
   - Form 11, Hanging Removal Record
   - Form 12, Hanging Removal Record -Working Copy
   - Form 13, Safe Clearance Transfer
   - Form 14, Clearance Removal Record
   - Form 15, Clearance Removal Record -Working Copy
   - Form 16, Sample Abnormal Removal of Personal Lock Form
   - Form 17, Abnormal Release of Safe Clearance Form
   - Form 18, Abnormal Transfer of Safe Clearance Form
8. Self-Inspection Checklist
9. Proposed Revision Form
10. CENWP-OD Safe Clearance Violation Guidance Memorandum for Record

Attachment 1: Acronyms

AHA	Activity Hazard Analysis
AI	Authorized Individual
ANSI	American National Standards Institute
AP	Affected Person
AR	Army Regulation
ASSE	American Society of Safety Engineers
BPA	Bonneville Power Administration
CFR	Code of Federal Regulations
CPL	Compliance Directives
DRII	Designated Representative of the Issuing Individual
EM	Engineer Manual
ER	Engineer Regulation
GDA	Government Designated Authority
HEC	Hazardous Energy Control
II	Issuing Individual
IP	Incidental Person
NWP	Portland District
OPM	Operations Project Manager
OSHA	Occupational Safety and Health Administration
PAI	Principal Authorized Individual
POC	Point of Contact
RO	Responsible Official
TPG	Temporary Protective Grounds
USACE	U.S. Army Corps of Engineers

Attachment 2: Sample Personal Locks and Tags

Attachment 2.1: Sample Personal Tag



Attachment 3: Sample Clearance Locks

Attachment 4: Sample ENG Form 1924, Caution Order Tag

DEPARTMENT OF THE ARMY
ENG FORM 1924, AUG 94
CORPS OF ENGINEERS

CAUTION ORDER TAG

CAUTION ORDER NO. _____
STATION _____
LINE OR EQUIPMENT _____
CAUTION HAZARDS _____
SPECIAL INSTRUCTIONS _____
WAIT _____ MINUTES BEFORE RECLOSING

	SIGNATURE	TIME	DATE
REQUESTED BY			
ORDERED ON BY			
PLACED BY			
RELEASED BY			
ORDERED OFF BY			
REMOVED BY			

PREVIOUS EDITIONS ARE OBSOLETE

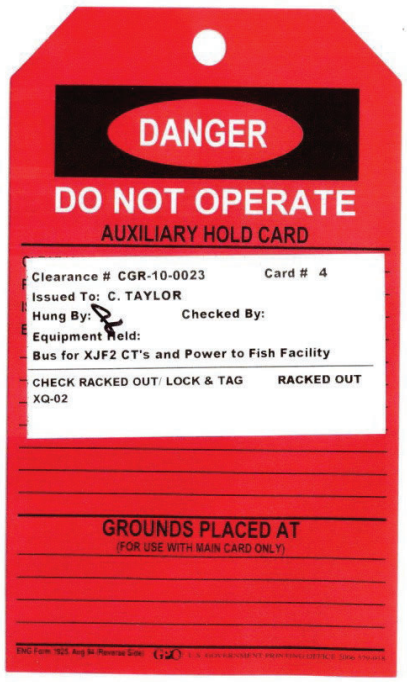
CAUTION

Conditions are abnormal or this equipment is being operated in an unusual manner. Operators will read comments on the front of this card and act accordingly. Use caution at all times. No operation shall take place without a signed record of time and date of the action.

SIGNATURE	TIME	DATE

The ENG Form 1924 can be found on the HQUSACE Publications web page (go to ENG Forms list) at this link: http://140.194.76.129/publications/.

Attachment 5: Sample ENG Form 1925, Safe Clearance Tag



DANGER

DO NOT OPERATE

AUXILIARY HOLD CARD

Clearance # CGR-10-0023 Card # 4

Issued To: C. TAYLOR

Hung By: Checked By:

Equipment Held:

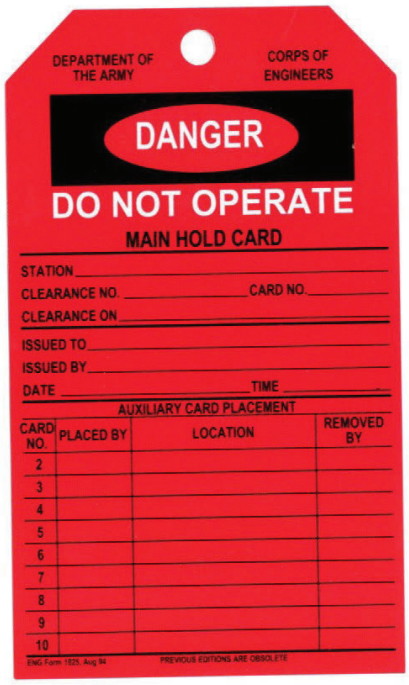
Bus for XJF2 CT's and Power to Fish Facility

CHECK RACKED OUT/ LOCK & TAG RACKED OUT

XQ-02

GROUNDS PLACED AT

(FOR USE WITH MAIN CARD ONLY)



DEPARTMENT OF THE ARMY

CORPS OF ENGINEERS

DANGER

DO NOT OPERATE

MAIN HOLD CARD

STATION

CLEARANCE NO. CARD NO.

CLEARANCE ON

ISSUED TO

ISSUED BY

DATE TIME

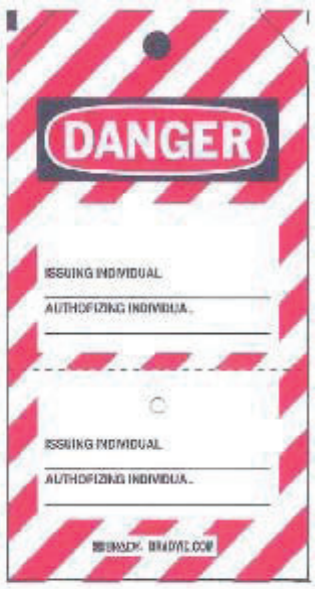
AUXILIARY CARD PLACEMENT

CARD NO.	PLACED BY	LOCATION	REMOVED BY
2			
3			
4			
5			
6			
7			
8			
9			
10			

ENG Form 1925, Aug 94 PREVIOUS EDITIONS ARE OBSOLETE

Attachment 5.1: Sample ENG Form 1925, Danger Tag – Equipment Lockout Tag

FRONT

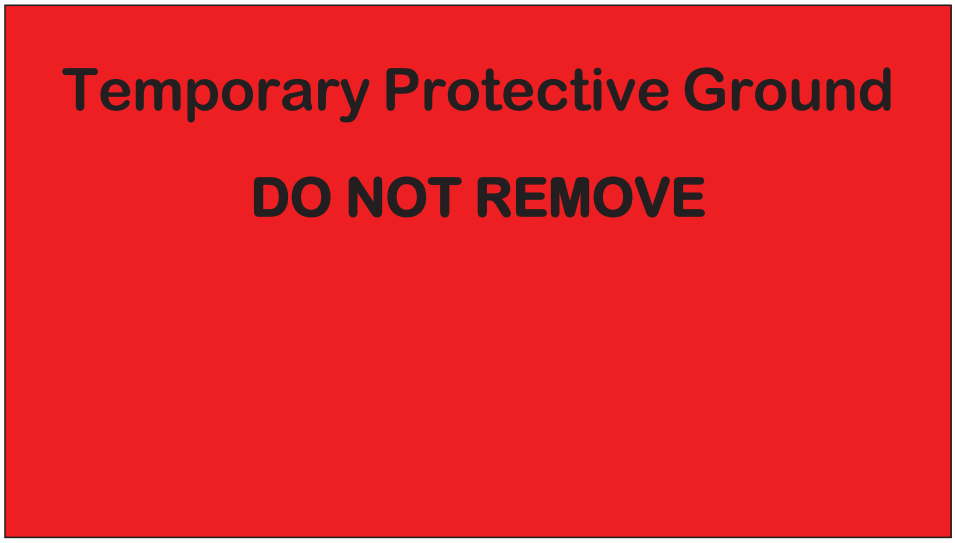


BACK

The ENG Form 1925 can be found on the HQUSACE Publications web page (go to ENG Forms list) at this link: http://140.194.76.129/publications/

Attachment 5.2 Temporary Protective Ground (TPG) Tag – SAMPLE

TPG tags shall be red and able to withstand environmental conditions.



Attachment 5.3 Sample HOLD ORDER Tags

Attachment 6: Sample ENG Form 1928, Caution Order

1.LOCATION	US ARMY CORPS OF ENGINEERS **CAUTION ORDER** For use of this form, see ER 385-1-31; the proponent agency is CESO-E	2.CAUTION ORDER NUMBER

SECTION 1 – CAUTION ORDER REQUESTED BY

U.. NAME AND TITLE (Last, FIRST MI)	2.LOCATION TELEPHONE NUMBER
3.REASON FOR CAUTION ORDER	
4.EQUIPMENT COVERED BY CAUTION ORDER	
5.CONDITIONS OR SPECIAL INSTRUCTIONS	
6.DELAY MINUTES BEFORE CLOSING SWITCH	
7.CAUTION ORDER TAG PLACED AT	

SECTION II – SIGNATURE CERTIFICATIONS

1a.CAUTION ORDER ISSUE TO NAME (last, first MI)	b.DATE(YYYYMMDD)	c.TIME (0001-2400 hours)	d.CAUTION ORDER ISSUED TO SIGNATURE
2a.CAUTION ORDER ISSUE BY NAME (last, first MI)	b.DATE(YYYYMMDD)	c.TIME (0001-2400 hours)	d.CAUTION ORDER ISSUED TO SIGNATURE
3a.CAUTION ORDER RELEASED BY NAME (last, first MI)	b.DATE(YYYYMMDD)	c.TIME (0001-2400 hours)	d.CAUTION ORDER RELEASED BY SIGNATURE
4a.CAUTION ORDER TAG REMOVED BY NAME (last, first MI)	b.DATE (YYYYMMDD)	c.TIME (0001-2400 hours)	d. CAUTION ORDER REMOVED BY SIGNATURE

ENG FORM 1928, AUG 1994 PREVIOUS EDITIONS ARE OBSOLETE VERSION

Attachment 7: CEN WP-OD HECP Forms

Reference EM 385-1-1, Section 01.A.14/15

Form Revised: 03/21/2017

U.S.ARMY CORPS OF ENGINEERS
ACTIVITY HAZARDS ANALYSIS

Print Form | Reset Form

AHA Number:	WO/PM Number:
Job Description:	Location:
Prepared by:	Date Prepared:
Revised by:	Date Revised:
Reviewed by:	Date Reviewed:
Clearance Required:	Clearance#:
SDS Required:	SDS Attached:
Comp. Person/Area:	Signature:
Qual. Person/Area:	Signature:
Cert. Person/ Area:	Signature:

Overall Risk Assessment Code (RAC) (Use highest code)

RISK ASSESSMENT CODE MATRIX

E= Extremely High Risk
H= High Risk
M= Moderate Risk
L= Low Risk

Severity	PROBABILTY				
	Frequent	Likely	Occasional	Seldom	Unlikely
Catastrophic	H	H	H	H	M
Critical	H	H	H	M	L
Marginal	H	M	M	L	L
Negligible	M	L	L	L	L

Add Row	JOB STEPS	HAZARDS	RECOMMENDED CONTROLS	RAC

Add Row	EQUIPMENT	TRAINING	INSPECTION

Approved by: Date:

AHA Number:			Job Description:		
Print Employee Name	Employee Signature*	Date	Print Employee Name	Employee Signature*	Date

A6-60

*Employee signatures certify they have readand understood the corresponding AHA.

Facility:	U.S. Army Corps of Engineers Portland District **Safe Clearance Request**	Date: Time:

Equipment					
Work To Be Performed:					
Requested By:		Date		Time	
To Be Issued To:		Date		Time	
Outage Duration / Scheduled Return To Service		Date		Time	

Isolation Points Required

Other Equipment Affected:

Time Required for Emergency Return to Service:

Miscellaneous:

Request Approved By:		Date		Time	

Facility:	U.S. Army Corps of Engineers Portland District **Clearance Placement Order**	Date: Time:
Clearance No.	Lockbox	Clearance Placement Completed By:
Equipment to be Switched:		
Clearance Placement required By:		
Purpose of Switching:		
Comments / Instructions		
Prepared By: (Issuing Individual)		
Verified By:		
Clearance Placement Completed By	Clearance Placement Completed By	Clearance Placement Completed By

Step	Tag	Lock:	Description:	Position	Initials	Date/Time

Facility:	U.S. Army Corps of Engineers Portland District **Clearance Placement Order**	Date: Time:
Clearance No.	Lockbox	Clearance Placement Completed By:
Equipment to be Switched:		
Clearance Placement required By:		
Purpose of Switching:		
Comments / Instructions		
Prepared By: (Issuing Individual)		
Verified By:		
Clearance Placement Completed By	Clearance Placement Completed By	Clearance Placement Completed By

Step	Tag	Lock:	Description:	Position	Initials	Date/Time

Working Copy

U.S. Army Corps of Engineers
SAFE CLEARANCE POINTS LIST

Clearance No.	Lockbox	Date	Time
Equipment Cleared			
Purpose of Clearance			
Clearance Required By			

		Tag	Lock	Isolation Point	Position
	Accept				
	Temp Lift				
	Release				
	Accept				
	Temp Lift				
	Release				
	Accept				
	Temp Lift				
	Release				
	Accept				
	Temp Lift				
	Release				
	Accept				
	Temp Lift				
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	Release				
	Accept				
	Temp Lift				
	Release				

U.S. Army Corps of Engineers Date:

SAFE CLEARANCE ORDER

Time:

Clearance No. Lockbox Prepared By:

Equipment Cleared:		
Purpose of Clearance:		
Special Conditions or Request:		
Clearance Required By:	Date:	Time:
Contact Information:	Phone:	
Estimated Time of Completion:	Estimated Time of Return to Service in an Emergency:	

Clearance Transfer

I have discussed this clearance including: the parameters of the clearance, Affected Person(s) working under the clearance, work performed, scope of work to be completed, placement of personal grounds, and the wish to transfer authorization of the clearance.

1.		
TRANSFERRED To: Print Name	Release Signature	Date:
I Accept Transfer		Date:

2.		
TRANSFERRED To: Print Name	Release Signature	Date:
I Accept Transfer		Date:

3.		
TRANSFERRED To: Print Name	Release Signature	Date:
I Accept Transfer		Date:

Confirmed the Absence of Hazardous Energy			
TESTED by: PAI	Signature	Date:	Time:
Testing methodology is outlined on AHA			

Confirmed the Absence of Hazardous Energy			
TESTED by: AP	Signature	Date:	Time:
Testing methodology is outlined on AHA			

Clearance Issued To:	Signature	Date	Time
Clearance Issued By	Initials	Date	Time
Clearance Hung By	Initials	Date	Time
Clearance Hung By	Initials	Date	Time
Clearance Released By	Initials	Date	Time
Clearance Removed By	Initials	Date	Time
Clearance Removed By	Initials	Date	Time

WORK PERMIT COVER LABEL

CLEARANCE NO. _____

Required By:

Equipment:

Date Required: Lockbox No.

U.S. Army Corps of Engineers

Safe Clearance Point Status Summary

Clearance No	Lockbox	Date	Time
Equipment Cleared			
Purpose of Clearance			
Clearance Required By			

Tag	Isolation Point	Position

U.S. Army Corps of Engineers

Safe Clearance Sign In Sheet

Clearance No.	Lockbox	Date	Time
Equipment Cleared:			
Clearance Required By			

By signing onto this Safe Clearance Sign-In Sheet, I verify that I understand the limits of the clearance and I fully comprehend the details of the job and have permission from the PAI to work under this clearance. I have also confirmed the absence of hazardous energy either by test or verification of signature documenting the testing has been performed.

		In		Out		
Print Name	Activity	Time	Date	Time	Date	Initials

Page:_____of _____

U.S. Army Corps of Engineers

SAFE CLEARANCE ACTIVITY

Clearance Number	Lockbox	Date	Time
Equipment Cleared			
Purpose of Clearance			
Required By			

☐ Accept	Tag Numbers
	Remarks
☐ Temp Lift	
☐ Release	

Confirmed the Absence of Hazardous Energy after Accepting Tags

Print Name (PAI)	Signature (PAI)	Date:	Time:
Print Name (AP)	Signature (AP)	Date:	Time:

☐ Accept	Tag Numbers
	Remarks
☐ Temp Lift	
☐ Release	

Confirmed the Absence of Hazardous Energy after Accepting Tags

Print Name (PAI)	Signature (PAI)	Date:	Time:
Print Name (AP)	Signature (AP)	Date:	Time:

☐ Accept	Tag Numbers
	Remarks
☐ Temp Lift	
☐ Release	

Confirmed the Absence of Hazardous Energy after Accepting Tags

Print Name (PAI)	Signature (PAI)	Date:	Time:
Print Name (AP)	Signature (AP)	Date:	Time:

☐ Accept	Tag Numbers
	Remarks
☐ Temp Lift	
☐ Release	

Confirmed the Absence of Hazardous Energy after Accepting Tags

Print Name (PAI)	Signature (PAI)	Date:	Time:
Print Name (AP)	Signature (AP)	Date:	Time:

	ARMY CORPS OF ENGINEERS CLEARANCE HANGING REMOVAL RECORD	Date: Time:
Clearance Number:	Clearance Required By:	
Equipment to be Cleared:		

Name	Initials	Cards	Check		Time	Date
			Placed	Removed		

	ARMY CORPS OF ENGINEERS CLEARANCE HANGING REMOVAL RECORD	Date: Time:

Clearance Number: Clearance Required By:

Equipment to be Cleared:

Name	Initials	Cards	Check		Time	Date
			Placed	Removed		

Working Copy

U.S. Army Corps of Engineers

SAFE CLEARANCE TRANSFER

Clearance No.	Lockbox	Date:	Time:
Equipment of Lines to be Cleared:			

TRANSFER

I _____ am transferring this Safe Clearance to _____ and I have informed him/her of the work to be performed and the limitations of the protection provided by this safe clearance.

Signature

_____ Date

_____

ACCEPTANCE

I _____ am accepting this Safe Clearance and have

Thoroughly checked the equipment and understand the limits of the protection provided. I accept all conditions of this Safe Clearance.

_____

_____

APPROVAL

Issuing Individual Signature _____

Date

When completed, attach this form to the "Safe Clearance Order Sheet and make appropriate log entries showing the transfer of the Safe Clearance

Facility:	U.S. Army Corps of Engineers Portland District **Clearance Removal Order**	Date: Time:
Clearance No.	Lockbox	Clearance Completed By:
Equipment to be Switched:		
Clearance Removal Required By:		
Purpose of Switching:		
Comments / Instructions		
Prepared By: (Issuing Individual)		
Verified By:		
Switching Completed By	Switching Completed By	Switching Completed By

Step	Tag	Lock:	Description:	Position	Initials	Date/Time

Facility:	U.S. Army Corps of Engineers Portland District **Clearance Removal Order**	Date: Time:
Clearance No.	Lockbox	Clearance Completed By:
Equipment to be Switched:		
Clearance Removal Required By:		
Purpose of Switching:		
Comments / Instructions		
Prepared By: (Issuing Individual)		
Verified By:		
Switching Completed By	Switching Completed By	Switching Completed By

Step	Tag	Lock:	Description:	Position	Initials	Date/Time

Working Copy

Abnormal Removal of Personal Lock Form

In accordance with the Portland District HEC program, this form must be completed and attached to the Safe Clearance and all information recorded in the Station Logbook when a personal lock is removed by someone other than the individual who placed it.

Safe Clearance #_____ Date:_____

Initial each step:

_____ The individual's supervisor has verified that the individual who placed the device is not at the facility.

_____ The individual's supervisor has made a reasonable effort to contact the individual who placed the device to inform them that the device has been/will be removed.

_____ Contact **WAS** made via _____ (Phone, Radio, etc.)

by (Individual)_____ on (Date)_____.

_____ Contact was **NOT** made!

SIGNATURES:

Issuing Individual:_____ Date:_____

Individual's Supervisor:_____ Date:_____

RO or their Designee:_____ Date:_____

The following must be signed by the individual when they return to the site prior to returning to work: I acknowledge that my personal lock has been removed in my absence and that I am **NOT** protected under this Safe Clearance any longer.

Signature:_____ Date:_____

Issuing Individual: Attach this document to the Safe Clearance.

Comments:_____

_____

Abnormal Release of Safe Clearance

In accordance with the Portland District HEC program, this form must be completed and attached to the Safe Clearance and all information recorded in the Station Logbook when a Safe Clearance must be abnormally released by an individual other than the PAI.

Safe Clearance #_____ Date:_____

Initial each step:

_____ The individual's Supervisor has verified that the PAI who holds the Safe Clearance is not at the facility.

_____ The individual's supervisor has made a reasonable effort to contact the PAI to inform them that the Safe Clearance has been/will be released.

_____ Contact **WAS** made via _____ (Phone, Radio, etc.)

by (Individual)_____ on (Date)_____.

_____ Contact was **NOT** made!

SIGNATURES:

Issuing Individual:_____ Date:_____

Individual's Supervisor:_____ Date:_____

RO or their Designee:_____ Date:_____

The following must be signed by the PAI when they return to the site prior to returning to work: I acknowledge that this Safe Clearance has been released in my absence and that I am **NOT** protected under this Safe Clearance any longer.

Signature:_____ Date:_____

Issuing Individual: Attach this document to the Safe Clearance Record.

Comments:_____

_____

Abnormal Transfer of Safe Clearance

In accordance with the Portland District HEC program, this form must be completed and attached to the Safe Clearance and all information recorded in the Station Logbook when a Safe Clearance is abnormally transferred to another Principal Authorized Individual.

Safe Clearance #_____ Date:_____

Initial each step:

_____ The individual's Supervisor has verified that the Principal Authorized Individual is not at the facility.

_____ The individual's supervisor has made a reasonable effort to contact the individual who accepted this Safe Clearance to inform them that the Safe Clearance has been/will be transferred.

_____ Contact **WAS** made via _____(Phone, Radio, etc.)

by (Individual)_____on (Date)_____.

_____ Contact was **NOT** made!

SIGNATURES:

Issuing Individual:_____ Date:_____

Individual's Supervisor:_____ Date:_____

RO or their Designee:_____ Date:_____

The following must be signed by the initial PAI when they return to the site prior to returning to work: I acknowledge that this Safe Clearance has been transferred to another PAI in my absence and that I am **NOT** protected under this Safe Clearance any longer.

Signature:_____ Date:_____

Issuing Individual: Attach this document to the Safe Clearance Record.

Comments:_____

_____

Attachment 8: Self Inspection Checklist

Portland District Hazardous Energy Control Program Self Inspection Checklist				
	References refer to: ER 385-1-31 The Control of Hazardous Energy 1 NOV 2009	YES	NO	N/A
	ITEM	*Please use your initials to mark* ***these columns***		
1.	Has the Responsible Official (RO) established a HEC Program at their respective Project?			
2.	Has the RO designated in writing the occupants and responsibilities of the following positions: *ER 385-1-31, 2-2c*			
a.	Issuing Individual (II)?			
b.	Designated Representative *to* the Issuing Individual (DRll)?			
c.	Principal Authorized Individual (PAI)?			
d.	Authorized individual(s) (AI)?			
3.	Has the RO designated in writing any special conditions at the project?			
4.	Has the RO established a Safe Clearance Committee to evaluate the HECP: *ER 385-1-31, 11-1*			
5.	Is the HECP reviewed (evaluated) and updated annually?			
6.	Does the Project perform annual inspections of their HECP procedures? *ER 385-1-31,11-3*			
a.	Do these inspections include a safe clearance in progress? *ER 385-1-31, 11-4*			
b.	Do these inspections include one lockout/tag out without a safe clearance? *ER 385-1-31, 11-4*			
c.	Do these inspections include a review of the procedural details? *ER 385-1-31, 11-4*			
d.	Do these inspections include a review between the inspector and the individuals involved in the safe clearance			
	Do these inspections document (date, persons involved, results) and identify deficiencies			
f.	Are inspection results forwarded to the RO?			
g.	Is the inspection documentation kept for a minimum of five (5) years?			
7.	Is Project documentation available to all persons involved with issuing and holding safe clearances? *ER 385-1-31, 2-2.I*			
8.	Does the Project HEC training program require initial, annual, and as-required retraining? *ER 385-1-31, 2*			
a.	Does annual retraining include a written assessment? *ER 385-1-31,*			
b.	Is training documentation maintained on file for at least two (2) years? *ER 385-1-31, 5-2*			
c.	Is retraining conducted when there is an unauthorized deviation from HEC procedures, demonstrated lack of employee knowledge, change in assignment, change in hazards, or change in the HECP? *ER 385-1-31, 5-4.b and* c			
9.	Are training records, clearance logs, forms, work permits, inspections reports kept for a minimum of 2 years? *ER 385-1-31*			
10.	Does the Issuing Individual direct the switching/clearing and related operations needed to place and remove clearances			
11.	Does the Issuing Individual accept and release safe clearances for the following conditions:			
a.	Line terminal clearances on tie lines?			
b.	Supply lines to and from outside utilities/agencies?			
12.	Does the Designated Representative to the Issuing Individual assure proper positioning of energy isolation devices?			
13.	Does the PAI place appropriate locks on energy isolation devices after verifying they've been properly switched & tagged			
14.	Does the PAI report the start and completion of energy isolation procedures? *ER 385-1-31*			
15.	Does the PAI use an Activity Hazard Analysis (AHA) to identify and analyze all hazardous energy sources for the work to be performed? *ER 385-1-31, 1-5.b and 7-2.b.(1).(a)*			
a.	Is a current AHA utilized for each activity requiring a safe clearance? *ER 385-1-31, 1.5b*			
17.	Is each lock uniquely marked for identification?			
b.	Are locks identifiable as HECP locks and standardized within the facility? *ER 385-1-31, 6-1.b*			
c.	Are personal locks used solely for personal protection and no other purpose?			
18.	Do tags identify to whom the safe clearance is issued? *ER 385-1-31, 6-2.d*			
a.	Does the PAI or Al initial each isolation point tag upon verification of that device's position and condition?			
19.	Does the PAI or II sign the safe clearance order?			
20.	Are public access area protected with both locks and tags? *ER 385-1-31, 7-1.d*			
21.	Is computer software or any other type of programming prohibited for use as an isolation point?			
22.	Are group lockboxes afforded positive control when in use? *ER 385-1-31,*			
23.	When the relevant individual is not available or an abnormal condition is declared, does the RO or Designee provide written authorization to remove that individual's personal lock? *ER 385-1-31, 7-5.b-h*			
24.	Has the RO identified personnel who can utilize personal lockout?			

Portland District Hazardous Energy Control Program Self Inspection Checklist				
	References refer to: ER 385-1-31 The Control of Hazardous Energy 1 NOV 2009	YES	NO	N/A
	ITEM	*Please use your initials to mark* ***these columns***		
25.	Does the II provide approval of personal lockout actions including start time, end time, and date?			
26.	Has the RO designated in writing what equipment may be removed from service without a safe clearance? *ER 385-1-31, 7-7*			
a.	Is all of this equipment 480-volt or lower? *ER 385-1-31, 7-7.a.(1) and b.{3)*			
b.	Can work on this equipment be accomplished during one shift with one crew? *ER 385-1-31, 7-7.a.(2) and b.(4)*			
c.	For multiple point lockout, does the equipment have a maximum of four isolation points? *ER 385-1-31, 7-7.a.(3)*			
d..	For multiple point lockout, has an AHA been prepared and approved? *ER 385-1-31, 7-7.a.{(i}.(a)*			
e.	For multiple point lockout, is there an approved, step-by-step procedure, specific to that piece of equipment being			
27.	Are Caution Orders reviewed by the RO or Designee at least every six months to validate their continued need? *ER 385-1-31, 8-2*			
28.	If a Caution Order is used for more than one (1) year, is the Caution Order removed and an operating procedure developed?			
29.	Are Caution Orders approved and documented by the II *ER 385-1-31, 8-4*			
30.	Does each Caution Order contain an identification number? *ER 385-1-31, 8-3*			
31.	Are Caution Orders entered into the station logbook? *ER 385-1-31, 8-5*			
32.	Does the II ensure that the following information is entered into the station logbook once a safe clearance is accepted and issued: *Para 7.8c1 and ER 395-1-31, 7-2.b.(4)*			
a.	**Safe clearance number?**			
b.	Purpose of the safe clearance?			
c.	System to be cleared?			
d.	Date and military time of issue?			
e.	Name of Issuing Individual?			
f.	Name of Primary Authorized Individual/Authorized Individual receiving the safe clearance?			
33.	Are Temporary Protective Grounds (TPGs) issued by the II *ER 385-1-31, 7-4.a.(2)*			
34.	Are TPGs recorded by the II in the station logbook? *ER 385-1-31, 7-4.c*			
35.	Do Affected Persons initial acceptance of each TPG in a TPG Log or equivalent? *ER 385-1-31, 7-4.a.{5}*			
36.	Do Affected Persons sign the safe clearance sign-in sheet and remove their personal locks from the lockbox before isolation locks and tags are removed? *Para 7.8g3 and ER 385-1-31, 7-2.d.(3)*			

REMARKS:

INSPECTORS:

Signature Date

Printed Name

Title and Organization

Signature Date

Printed Name

Title and Organization

Attachment 9: Proposed Revision Form

Proposed Revision Form

Type of suggested revision (Circle): addition deletion rewording other

Section Number_____ Paragraph Number_____ Subparagraph _____

OLD WORDING OF AFFECTED PART

SUGGESTED NEW WORDING

JUSTIFICATION

Revision recommended by _____ Phone#_____
(If additional space is needed, attach necessary pages)

Please e-mail to the Technical Operations Branch Chief through the appropriate Hydroelectric Power Operations Manager for Hydropower Projects or the Chief Electrician for Navigation

Attachment 10: CENWP-OD Safe Clearance Violation Guidance Memorandum for Record, signed 2016-03-08

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, PORTLAND DISTRICT
PO BOX 2946
PORTLAND OR 97208-2946

CENWP-OD

8 March 2016

MEMORANDUM FOR RECORD

SUBJECT: Safe Clearance Violation Guidance

1. Hazardous Energy Control and the effectiveness of the safe clearance process are of the highest priority for Portland District. Violations of the safe clearance process by Government employees must be taken seriously and addressed in a manner proportionate to the infraction. Decision authority for safe clearance infractions remains at the supervisor's level.

2. The supervisor, in coordination with the Operating Project Manager or Branch Chief, has the authority to determine the appropriate penalty for a safe clearance violation based on intent of the employee, potential and/or realized impact of the violation, opportunities for and expected effectiveness of re-training, and other mitigating circumstances.

3. All safe clearance infractions and outcomes shall be reported to the Chief of Operations Division.

DWANE E. WATSEK
Chief, Operations Division

Contract		Within 14 Days
Description/Location		Late Milestone
Contractor		Completed Milestone
As of:	19-Sep-24	

Category	Activity	Resp	POC	Scheduled	Actual	Status
Critical Activities	Final Electrical Connection	KTR				
	Final Water Connections	KTR				
	Final Gas Connections	KTR				
	Critical System StartUps	KTR				
	Generator Testing	KTR				
	Superchlorination of Potable Water Systems	KTR				
	Electrical System Testing	KTR				
	Plumbing/Backflow Testing	KTR				
	Elevator Testing	KTR				
	Boiler Testing	KTR				
	Intrusion Detection Testing	KTR				
Life Safety	F/A Programming	KTR				Coordinate with DPW for programming
	F/A Testing	KTR				Includes Mass notification
	F/A Training	KTR				
Commissioning	Air Barrier Test	KTR				
	Air Barrier Test Report	KTR				
	DALT	KTR				
	TAB	KTR				
	TAB Report	KTR				
	Equipment Startup	KTR				
	Pre-Functional Checklists	KTR				
	PVT Testing	KTR				
	PVT Report	KTR				
	Certificate of Readiness	KTR				All Items above must be complete
	Functional Performance Testing	KTR				
	Systems Manual	KTR				
	Final Commissioning Report	KTR				

QC items prior to formal inspections	Draft DD1354 to KTR	COE				
	DD1354 info to COE	KTR				
	DD1354 review by DPW	DPW				
	Interim DD1354 complete (unsigned)	COE				
	Installed Property List	KTR				
	Access Control/Security Testing	KTR				
	Comm Manhole Inspection	KTR				
	Comm Room inspection	KTR				
	Boiler Certification	KTR				
	Backflow Preventer Certification	KTR				
	Draft O&Ms	KTR				
	Draft Warranty Management Plan	KTR				
	Warranty Conference	KTR				
	Training	KTR				
	LEED Documentation to 3rd Party	KTR				
	Valve Tags, Charts, Diagrams	KTR				
	Landscaping/Restoration	KTR				
	Signage/Labeling	KTR				
	Submittal Register Closeout	KTR				
	Resolution of RFIs	COE				
Stakeholder Items	IT/Telecommunications Install	DPW				
	(custodial/grounds/etc.)	DPW				
	GFE status/delivery schedule	DPW				
Building Keying Procedures	Keying Meeting	COE				
	Keys/Locks Ordered	KTR				
	Keys/Locks received by DPW	DPW				
	Keys/Locks Inventory	KTR				If desired upon receipt of items
	Keys/Locks Installed	KTR				
Formal Inspections/ Turnover	Final Cleaning	KTR				
	Contractor Pre-Final	KTR				
	Building Pre-Final	KTR				
	Correction of Deficiencies	KTR				
	Building Final	KTR				
	Spare Parts, Extra Stock, Special tools etc	KTR				
	Interim DD1354 Signed and sent to DPW	COE				

	Substantial Completion Letter	COE				
Closeout Deliverables	As-Built Drawings/Redlines	KTR				
	Final O&M Manuals	KTR				
	Final Warranty Plan with all signatures	KTR				
	LEED Certification	Other				
	Final Approved Shop Drawings	KTR				
	Facility Data Workbook (Final)	KTR				
	Sustainability Notebook	KTR				
	Facility Document Set (Final)	KTR				
	Record Drawings	KTR				
Warranty	Warranty Start	COE				Starts at final acceptance unless otherwise noted
	Tentative 4 mo.	COE				Dates are approximate
	Tentative 8 mo.	COE				Dates are approximate
	Tentative 11 mo.	COE				Dates are approximate
	Warranty End	COE				
Project Specific Items						

Construction and Demolition (C&D) Diversion - Disposal Cumulative Report

Project Information

1. Calendar Year Being Reported	2. Contract Number	3. Task Order Number (if any)

4. Project Name/Site Location

5. Contractor Signature	Date	6. PE/COR Signature	Date

C&D Report by Quarter

			Recycled (Note 3)	Composted (Note 4)	Converted (Note 5)	Landfilled (Note 6)	Total Cost (Note 7)
Enter data for each destination IN TONS. Attach additional sheets if more room is required. All reports must include landfill tons or provide justification for not supplying data. Likewise, submission of blank forms must be justified (e.g., "no activity for qtr").							
1st QTR (Note 2)	7. Destination						
	8. Destination						
	9. Destination						
		Subtotals	0	0	0	0	$ -
2nd QTR (Note 2)	10. Destination						
	12. Destination						
	13. Destination						
		Subtotals	0	0	0	0	$ -
3rd QTR (Note 2)	15. Destination						
	16. Destination						
	17. Destination						
		Subtotals	0	0	0	0	$ -
4th QTR (Note 2)	19. Destination						
	20. Destination						
	21. Destination						
		Subtotals	0	0	0	0	$ -

Contractors: Submit completed form and supporting information to the COR or Government Project Engineer via RMS Submittal.

PE/COR: Submit to CRAFT POC for data entry.

Notes:

1. C&D materials are those generated by construction, renovation, repair, and demolition activities.
2. Destination is the name of the facility to which C&D materials were transported.
3. Recycled includes materials sent to a recycling facility.
4. Composted includes any vegetational material sent to a recycling/composting facility.
5. Converted includes waste that was converted into an energy use (e.g. waste converted to heat, electricity, or fuel).
6. Landfilled includes any C&D waste that is landfilled or incinerated at a landfill facility.
7. Total costs of all disposal methods.