

SPECIFICATIONS

(FOR CONSTRUCTION CONTRACT)

Solicitation No. W9128F-04-B-0017

Camp Ashland Flood Protection
Project

Platte River, NE

July 2004



US Army Corps
of Engineers
Omaha District

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**Camp Ashland Flood Protection Project
Platte River, NE**

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SOLICITATION, OFFER, AND AWARD (Construction, Alteration, or Repair)	1. SOLICITATION NO. W9128F-04-B-0017	2. TYPE OF SOLICITATION <input checked="" type="checkbox"/> SEALED BID (IFB) <input type="checkbox"/> NEGOTIATED (RFP)	3. DATE ISSUED 29 JUL 2004	PAGE OF PAGES 1 OF 7
	IMPORTANT - The "offer" section on the reverse must be fully completed by offeror.			

4. CONTRACT NO.	5. REQUISITION/PURCHASE REQUEST NO.	6. PROJECT NO.
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7. ISSUED BY U S ARMY ENGINEER DISTRICT, OMAHA 106 SOUTH 15TH STREET OMAHA, NE 68102-1618	CODE CT	8. ADDRESS OFFER TO US ARMY CORPS OF ENGINEERS Attn: CONTRACTING DIVISION (CENWO-CT) 106 SOUTH 15TH STREET OMAHA, NE 68102-1618
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9. FOR INFORMATION CALL:	A. NAME Cindy Siford	B. TELEPHONE NO. (Include area code) (NO COLLECT CALLS) 402-221-4824
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SOLICITATION

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

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

The Offeror hereby agrees to do all the work described in these documents entitled:

Camp Ashland Flood Protection Project, Platte River, NE

RETURN WITH BIDS: SECTION 00010 (SF1442), SECTION 00600 REPRESENTATIONS, CERTIFICATIONS & OTHER STATEMENTS OF BIDDERS, and all Bonding Requirements, See SECTION 00700 CONTRACT CLAUSES and SECTION 00100 for Performance and Payment Bonds.

This project is set-aside under the Historically Underutilized Business Zone (HUBZone) Program. To be considered for award, successful bidder must be a certified HUBZone contractor. Status as a qualified HUBZone small business concern is determined by the Small Business Administration (SBA) in accordance with 13 CFR part 126. If the SBA determines that a concern is a qualified HUBZone small business concern, it will issue a certification to that effect and will add the concern to the List of Qualified HUBZone Small Business Concerns on its Internet website at <http://www.sba.gov/hubzone>.

11. The Contractor shall begin performance within 10 calendar days and complete it within 720 calendar days after receiving
 award, notice to proceed. This performance period is mandatory, negotiable. (See _____.)

12A. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE AND PAYMENT BONDS? (If "YES," indicate within how many calendar days after award in Item 12B.) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	12B. CALENDAR DAYS
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13. ADDITIONAL SOLICITATION REQUIREMENTS:

A. Sealed offers in original and 0 copies to perform the work required are due at the place specified in Item 8 by 1400 (hour) local time 30 AUG 2004 (date). If this is a sealed bid solicitation, offers must be publicly opened at that time. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due.

B. An offer guarantee is, is not required.

C. All offers are subject to the (1) work requirements, and (2) other provisions and clauses incorporated in the solicitation in full text or by reference.

D. Offers providing less than 60 calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.

14. NAME AND ADDRESS OF OFFEROR (Include ZIP Code) DUNS Number : CODE FACILITY CODE	15. TELEPHONE NO. (Include area code) 16. REMITTANCE ADDRESS (Include only if different than Item 14)
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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 60 calendar days after the date offers are due. (Insert any number equal to or greater than the minimum requirement stated in Item 13D. Failure to insert any number means the offeror accepts the minimum in Item 13D.)

AMOUNTS

See Bidding Schedule
 Contractor's Fax No. _____ CAGE Code: _____
 Contractor's e-mail Address: _____

18. The offeror agrees to furnish any required performance and payment bonds.

19. ACKNOWLEDGMENT OF AMENDMENTS

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

AMENDMENT NO.										
DATE										

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

21. ITEMS ACCEPTED:

22. AMOUNT	23. ACCOUNTING AND APPROPRIATION DATA
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24. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)	ITEM 26	25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO <input type="checkbox"/> 10 U.S.C. 2304(c) () <input type="checkbox"/> 41 U.S.C. 253(c) ()
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26. ADMINISTERED BY CODE	27. PAYMENT WILL BE MADE BY
US ARMY ENGINEER DISTRICT, OMAHA 106 SOUTH 15TH STREET OMAHA, NE 68102-1618	USAED OMAHA C/O USACE FINANCE CENTER 5722 INTEGRITY DRIVE MILLINGTON, TN 38054-5005

CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE

<input type="checkbox"/> 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, requisitions identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications incorporated by reference in or attached to this contract.	<input type="checkbox"/> 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 commutes the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual document is necessary.
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30A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN (Type or print)	31A. NAME OF CONTRACTING OFFICER (Type or print)
30B. SIGNATURE	31B. UNITED STATES OF AMERICA BY
30C. DATE	31C. AWARD DATE

BIDDING SCHEDULE

<u>Bid Item</u> <u>No.</u> <u>Description</u>	<u>Estimated</u> <u>Quantity</u>	<u>Unit</u>	<u>Unit</u> <u>Price</u>	<u>Amount</u>
<u>BASIC BID</u>				
1. Entire work, complete, for existing levee embankment excavation and placement as shown on the drawings and in the specifications	16,000	CY	\$ _____	\$ _____
2. Entire work, complete, for cohesive fill as shown on the drawings and in the specifications	70,000	CY	\$ _____	\$ _____
3. Entire work, complete, for cohesionless fill as shown on the drawings and in the specifications	15,000	CY	\$ _____	\$ _____
4. Entire work, complete, for topsoil as shown on the drawings and in the specifications	7,000	CY	\$ _____	\$ _____
5. Entire work, complete, for Stone (riprap) Protection as shown on the drawings and in the specifications	12,500	Tons	\$ _____	\$ _____
6. Entire work, complete, for geotextile filter material as shown on the drawings and in the specifications	11,000	SY	\$ _____	\$ _____
7. Entire work, complete, for levee surfacing as shown on the drawings and in the specifications	1,850	Tons	\$ _____	\$ _____
8. All remaining work	L.S.	Job	-	\$ _____

TOTAL AMOUNT BASIC \$ _____

<u>Bid Item</u>	<u>Estimated</u>		<u>Unit</u>		
<u>No. Description</u>	<u>Quantity</u>	<u>Unit</u>	<u>Price</u>	<u>Amount</u>	

OPTION 1 – UPSTREAM LEVEE

(Option 1 shall include all work for levee construction and all other project features from levee station 55 + 00 to levee station 68 + 50 - See Note 4 below)

O-1a Entire work, complete, for cohesive fill as shown on the drawings and in the specifications	25,000	CY	\$ _____	\$ _____
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O-1b Entire work, complete, for topsoil as shown on the drawings and in the specifications	3,000	CY	\$ _____	\$ _____
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O-1c Entire work, complete, for levee surfacing as shown on the drawings and in the specifications	500	tons	\$ _____	\$ _____
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TOTAL AMOUNT OPTION 1 \$ _____

OPTION 2 – UPSTREAM LEVEE CONTINUATION

(Option 2 shall include all work for levee construction and all other work from levee station 68 + 50 to levee station 96 + 00 – See Note 4 below)

O-2a Entire work, complete, for cohesive fill as shown on the drawings and in the specifications	20,000	CY	\$ _____	\$ _____
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O-2b Entire work, complete, for topsoil excavated and placed as shown on the drawings and in the specifications	3,000	CY	\$ _____	\$ _____
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O-2c Entire work, complete, for levee surfacing as shown on the drawings and in the specifications	800	tons	\$ _____	\$ _____
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TOTAL AMOUNT OPTION 2 \$ _____

Bid Item	Estimated		Unit	
<u>No.</u> <u>Description</u>	<u>Quantity</u>		<u>Unit</u>	<u>Price</u> <u>Amount</u>

OPTION 3 – UPSTREAM LEVEE CONTINUATION

(Option 3 shall include all work for levee construction and all other work from levee station 96 + 00 to levee station 121 + 00 – See Note 4 below)

O-3a	Entire work, complete, for cohesive fill as shown on the drawings and in the specifications	22,500	CY	\$ _____	\$ _____
O-3b	Entire work, complete, for topsoil excavated and placed as shown on the drawings and in the specifications	4,500	CY	\$ _____	\$ _____
O-3c	Entire work, complete, for levee surfacing as shown on the drawings and in the specifications	1,000	tons	\$ _____	\$ _____

TOTAL AMOUNT OPTION 3 \$ _____

OPTION 4 – UPSTREAM LEVEE CONTINUATION

(Option 4 shall include all work for levee construction and all other work from levee station 121 + 00 to levee station 145 + 23 – See Note 4 below)

O-4a	Entire work, complete, for cohesive fill as shown on the drawings and in the specifications	22,500	CY	\$ _____	\$ _____
O-4b	Entire work, complete, for topsoil excavated and placed as shown on the drawings and in the specifications	4,500	CY	\$ _____	\$ _____
O-4c	Entire work, complete, for levee surfacing as shown on the drawings and in the specifications	1,000	tons	\$ _____	\$ _____

TOTAL AMOUNT OPTION 4 \$ _____

Bid Item	Estimated	Unit	Unit	Amount
<u>No.</u> <u>Description</u>	<u>Quantity</u>	<u>Unit</u>	<u>Price</u>	<u>Amount</u>

OPTION 5 – GRADE CONTROL STRUCTURE AND RIPRAP

Option 5 shall include all work for the grade control berm and all other work from weir station 0 + 71 to weir station 5 + 25 and all work for riprap and all other work from levee station 0 + 50 to levee station 6 + 00 – See Note 4 below)

O-5a	Entire work, complete, for cohesionless fill as shown on the drawings and in the specifications	8,000	CY	\$ _____	\$ _____
O-5b	Entire work, complete, for Stone (riprap) Protection as shown on the drawings and in the specifications	11,000	Tons	\$ _____	\$ _____
O-5c.	Entire work, complete, for geotextile filter material as shown on the drawings and in the specifications	1,800	SY	\$ _____	\$ _____
O-5d	Entire work, complete, for levee surfacing as shown on the drawings and in the specifications	250	tons	\$ _____	\$ _____
O-5e.	Entire work, complete, for sheet pile as shown on the drawings and in the specifications	8,800	SF	\$ _____	\$ _____
O-5f	Entire work, complete, for bedding as shown on the drawings and in the specifications	2,700	Tons	\$ _____	\$ _____

OPTION 6 – LAKE MITIGATION EXCAVATION

Option 6 shall include all work for lake mitigation excavation and all other work – See Note 4 below)

O-6a	Entire work, complete, for lake mitigation excavation as shown on the drawings and in the specifications	5,700	CY	\$ _____	\$ _____
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TOTAL AMOUNT OPTION 6 \$ _____

Notes:

1. The quantities for unit priced items are estimated only and the respective unit price will prevail in the event of an overrun or underrun subject to Contract Clauses "Variation in Estimated Quantity."
2. See SECTION 00100, INSTRUCTIONS, CONDITIONS, & NOTICES TO BIDDERS for evaluation of options. The Government reserves the right to exercise the options within 90 days after issuance of Notice to Proceed.
3. Bid prices must be entered for all items of the schedule. Total amount bids submitted without bid prices being entered on individual items will be rejected. Extensions will be subject to verification by the Government. In case of variation between the unit prices and the extensions, the unit prices will be considered the bid. In case of variation between the individual bid item prices and the total amount, the individual bid prices will be considered the bid.
4. A modification to a bid, which provides for a single adjustment to the total amount bid should state the application of the adjustment to each respective unit price and lump sum price affected. If the modification is not so apportioned, the single adjustment will be applied to Item No. 8.
5. The pricing for the base bid shall include all work for levee construction and all other project features from levee station 0 + 00 to levee station 55+00 and the grade control berm structure construction. The pricing for Option 1 shall include all work for levee construction and all other project features from levee station 55 + 00 to levee station 68+50, which includes bid items O-1a thru O-1d. The pricing for Option 2 shall include all work for levee construction and all other work from levee station 68+50 to levee station 96+00, which includes bid items O-2a thru O-2d. The pricing for Option 3 shall include all work for levee construction and all other work from levee station 96 + 00 to levee station 121 + 00, which includes bid items O-3a thru O-3d. The pricing for Option 4 shall include all work for levee construction and all other work from levee station 121 + 00 to levee station 145 + 23, which includes bid items O-4a thru O-4d. The pricing for Option 5 shall include all work for the grade control structure and riprap and all other project features from Option 5 shall include all work for the grade control berm and all other work from weir station 0 + 71 to weir station 5 + 25 and all work for riprap and all other work from levee station 0 + 50 to levee station 6 + 00, which includes bid items O-5a thru O-5g. The pricing for Option 6 shall include all work for lake mitigation excavation and all other work, which includes 0-6A. The total for Option 1 will not be awarded without the total Base Bid. The total for Option 2 will not be awarded without the total Base Bid and total Option 1. The total for Option 3 will not be awarded without the total Base Bid and Options 1 and 2. The total for Option 4 will not be awarded without the total Base Bid and total Options 1, 2, and 3. Options 5 and 6, however, may be awarded without any of Options 1, 2, 3, or 4 – See Note 6 below)
6. See Section 01550 MEASUREMENT AND PAYMENT for additional information.

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SECTION 00100

INSTRUCTIONS, CONDITIONS & NOTICES TO BIDDERS
(July 2000, Revised May 2004)

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SECTION 00100

INSTRUCTIONS, CONDITIONS & NOTICES TO BIDDERS

1 GENERAL BIDDING INFORMATION

Bids shall be either mailed or hand-carried as indicated below. Bid will be PUBLICLY opened at the bid time indicated on Standard Form SF 1442 (Page 00010-1).

1.1 MAILED BIDS AND HAND-CARRIED BIDS

a. Mailed bids shall be addressed to the location as indicated on Standard Form SF 1442 (Page 00010-1), Item No. 8.

b. Due to heightened security at Government installations, those bidders who have their bids hand-carried* shall contact Cindy Siford, Contract Specialist at (402) 221- 4824 or (402) 221-4100 prior to delivering to the U. S. Army Corps of Engineer District, Omaha, 106 South 15th Street, Omaha, NE.

c. On the date specified and for thirty (30) minutes prior to time specified on Standard Form SF 1442, Page 00010-1, item 13.A, a Contracting representative will be in the lobby to receive bids. At the time specified on Standard SF 1442 Page 00010-1, item 13.A, the designated bid opening official will announce that receipt of bids is closed. Official time will be established by time/stamp clock located in the area where bids are received.

d. Anyone wishing to attend this public opening will be required to present photo identification to sign in and then will be escorted to the facility where bids will be opened. Once bids have been opened, read and recorded, attendees will then be escorted to exit the building.

e. RETURN ADDRESS REQUIREMENTS

Bidder(s) must ensure that ALL mail sent to the Omaha District, U.S. Army Corps of Engineers, either pre-contract or post-contract award, has a return mailing address on the outside of the envelope, package, box, etc. ANY MAIL addressed to the U.S. Army Corps of Engineers, including but not limited to bids, modifications to bids, proposals, revised proposals, bid guarantees, bonds, correspondence, etc., will be REJECTED by the US Army Corps of Engineers mail room facility located at 106 South Street, Omaha, Nebraska 68102-1618 if it does not contain a return mailing address. **There will be no exceptions.**

*This instruction shall also apply to those bids delivered through a delivery or parcel service.

1.2 SOLICITATION RESTRICTIONS

This project is set-aside under the Historically Underutilized Business Zone (HUBZone) Program. To be considered for award, successful bidder must be a certified HUBZone contractor. Status as a qualified HUBZone small business concern is determined by the Small Business Administration (SBA) in accordance with 13 CFR part 126. If the SBA determines that a concern is a

qualified HUBZone small business concern, it will issue a certification to that effect and will add the concern to the List of Qualified HUBZone Small Business Concerns on its Internet website at <http://www.sba.gov/hubzone>. Also see paragraph 33 "Notice of Total HUBZone Set-Aside".

1.3 BASIS FOR AWARD.

IT IS INTENDED THAT AWARD WILL BE MADE TO ONE BIDDER FOR THE ENTIRE WORK.

1.4 DESCRIPTION OF WORK

The scope of this project is to furnish all plant, labor, materials, and equipment and performing all work for construction of a frontage levee at Camp Ashland. The levee will be approximately 3000 feet in length. Work shall be in accordance with plans and specifications issued with this solicitation.

1.5 ESTIMATED CONSTRUCTION COST

The estimated construction cost of this project is between \$1,000,000 and \$2,500,000.

2 (FAR 52.214-6) EXPLANATION TO PROSPECTIVE BIDDERS (APRIL 1984).

Any prospective bidder desiring an explanation or interpretation of the solicitation, drawings, specifications, etc., must request it in writing soon enough to allow a reply to reach all prospective bidders before the submission of their bids. Oral explanations or instructions given before the award of a contract will not be binding. Any information given a prospective bidder concerning a solicitation will be furnished promptly to all other prospective bidders as an amendment to the solicitation, if that information is necessary in submitting bids or if the lack of it would be prejudicial to other prospective bidders.

3 RESERVED

(NOTE: FACSIMILE, ELECTRONIC COMMERCE OR TELEGRAPHIC BIDS ARE NOT AUTHORIZED AND WILL NOT BE ACCEPTED. TELEGRAPHIC MODIFICATIONS OR WITHDRAWAL OF BIDS ARE AUTHORIZED. FACSIMILE MODIFICATIONS OR WITHDRAWAL ARE NOT AUTHORIZED.)

4 (FAR 52.214-5) SUBMISSION OF BIDS (MAR 1997).

(a) Bids and bid modifications shall be submitted in sealed envelopes or packages (unless submitted by electronic means) (1) addressed to the office specified in the solicitation and (2) showing the time and date specified for receipt, the solicitation number, and the name and address of the bidder.

(b) Bidders using commercial carrier services shall ensure that the bid is addressed and marked on the outermost envelope or wrapper as prescribed in subparagraphs (a) (1) and (2) of this provision when delivered to the office specified in the solicitation.

(c) Telegraphic bids will not be considered unless authorized by the solicitation; however, bids may be modified or withdrawn by written or telegraphic notice.

(d) Facsimile bids, modifications, or withdrawals, will not be considered unless authorized by the solicitation

(e) Bids submitted by electronic commerce shall be considered only if the electronic commerce method was specifically stipulated or permitted by the solicitation.

5 (FAR 52.214-18) PREPARATION OF BIDS - CONSTRUCTION (APRIL 1984).

(a) Bids must be--

- (1) Submitted on the forms furnished by the Government or on copies of those forms, and
- (2) **Manually signed.** The person signing a bid must initial each erasure or change appearing on any bid form.

(b) The bid form may require bidders to submit bid prices for one or more items on various bases, including--

- (1) Lump sum bidding;
- (2) Alternate prices;
- (3) Units of construction; or
- (4) Any combination of subparagraphs (1) through (3) above.

(c) If the solicitation requires bidding on all items, failure to do so will disqualify the bid. If bidding on all items is not required, bidders should insert the words "no bid" in the space provided for any item on which no price is submitted.

(d) Alternate bids will not be considered unless this solicitation authorizes their submission.

6 (FAR 52.214-4) FALSE STATEMENTS IN BIDS (APRIL 1984).

Bidders must provide full, accurate, and complete information as required by this solicitation and its attachments. The penalty for making false statements in bids is prescribed in 18 U.S.C. 1001.

(NOTE: FACSIMILE, ELECTRONIC COMMERCE OR TELEGRAPHIC BIDS ARE NOT AUTHORIZED AND WILL NOT BE ACCEPTED. TELEGRAPHIC MODIFICATIONS OR WITHDRAWAL OF BIDS ARE AUTHORIZED. FACSIMILE MODIFICATIONS OR WITHDRAWAL ARE NOT AUTHORIZED.)

7 (FAR 52.214-7) LATE SUBMISSIONS, MODIFICATIONS, AND WITHDRAWALS OF BIDS (NOV 1999).

(a) Bidders are responsible for submitting bids, and any modifications or withdrawals, so as to reach the Government office designated in the invitation for bids (IFB) by the time specified in the IFB. If no time is specified in the IFB, the time for receipt is 4:30 p.m., local time, for the designated Government office on the date that bids are due.

(b) (1) Any bid, modification, or withdrawal received at the Government office designated in the IFB after the exact time specified for receipt of bids is "late" and will not be considered unless it is received before award is made, the Contracting Officer determines that accepting the late bid would not unduly delay the acquisition; and—

(i) If it was transmitted through an electronic commerce method authorized by the IFB, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of bids; or

(ii) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of bids and was under the Government's control prior to the time set for receipt of bids.

(2) However, a late modification of an otherwise successful bid that makes its terms more favorable to the Government, will be considered at any time it is received and may be accepted.

(c) Acceptable evidence to establish the time of receipt at the Government installation includes the time/date stamp of that installation on the bid wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

(d) If an emergency or unanticipated event interrupts normal Government processes so that bids cannot be received at the Government office designated for receipt of bids by the exact time specified in the IFB and urgent Government requirements preclude amendment of the IFB, the time specified for receipt of bids will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume.

(e) Bids may be withdrawn by written notice received at any time before the exact time set for receipt of bids. If the IFB authorizes facsimile bids, bids may be withdrawn via facsimile received at any time before the exact time set for receipt of bids, subject to the conditions specified in the provision at 52.214-31, Facsimile Bids. A bid may be withdrawn in person by a bidder or its authorized representative if, before the exact time set for receipt of bids, the identity of the person requesting withdrawal is established and the person signs a receipt for the bid.

(End of provision)

8 INFORMATION FOR MODIFYING BIDS.

Bids which have been delivered to the designated bid receiving office may be modified or withdrawn by mail, mailgram, or telegram received at any time before the exact time set for receipt of bids. Modifications or withdrawals sent by mail should be transmitted to the place of bid opening Standard Form SF1442 (Page 00010-1), Item 8. Telephone modifications or withdrawals, other than telecopier, will not be accepted. All bid modifications or withdrawals must be signed by the bidder or its authorized representative. Any questions regarding these procedures should be directed to the Omaha District's Contracting Division at (402) 221-4824. This number should also be used to verify the receipt of messages.

9 BID GUARANTEE.

See Contract Clauses FAR 52.228-1, BID GUARANTEE. The Bid Guarantee must include original signatures and be accompanied by a Power of Attorney appointing an attorney-in-fact with authority to bind the surety so that, at the time of bid opening, the bond is enforceable against the surety should the bidder fail to meet its obligation. The Power of Attorney must include a

Certification as to the authority of the surety's agents that either has an original (wet) signature of an officer of the surety or has a mechanically applied or facsimile signature that is supported by a resolution of the surety authorizing their use and committing it to be bound by them.

10 PERFORMANCE AND PAYMENT BONDS.

See Contract Clauses clause FAR 52.228-15, PERFORMANCE AND PAYMENT BONDS. To have the bond considered valid, both the bond and the Power of Attorney must be original. Facsimile copies will not be acceptable, and will render the bid invalid, therefore eliminating it from competition.

(NOTE: FOR THE PURPOSES OF THIS SOLICITATION, THE WORD "ITEM" SHALL BE CONSIDERED TO MEAN "SCHEDULE.")

11 (FAR 52.214-19) CONTRACT AWARD - SEALED BIDDING - CONSTRUCTION (AUG 1996).

(a) The Government will evaluate bids in response to this solicitation without discussions and will award a contract to the responsible bidder whose bid, conforming to the solicitation, will be most advantageous to the Government, considering only price and the price-related factors specified elsewhere in the solicitation.

(b) The Government may reject any or all bids, and waive informalities or minor irregularities in bids received.

(c) The Government may accept any item or combination of items, unless doing so is precluded by a restrictive limitation in the solicitation of the bid.

(d) The Government may reject a bid as nonresponsive if the prices bid are materially unbalanced between line items or subline items. A bid is materially unbalanced when it is based on prices significantly less than cost for some work, and prices which are significantly overstated in relation to cost for other work, and if there is a reasonable doubt that the bid will result in the lowest overall cost to the Government even though it may be the low evaluated bid, of it is so unbalanced as to be tantamount to allowing an advance payment.

12 NORTH AMERICAN CLASSIFICATION SYSTEM (NAICS).

In accordance with NAICS Manual, the work in this solicitation is assigned classification code 237990.

13 SMALL BUSINESS SIZE STANDARD.

This solicitation is limited to HUB zone small business concerns, but, for definition purposes, a concern is small if its average annual receipts for its preceding 3 fiscal years did not exceed \$28.5 million. (based on FAR 19.102)

14 (FAR 52.214-3) AMENDMENTS TO INVITATIONS FOR BIDS (DECEMBER 1989).

- (a) If this solicitation is amended, then all terms and conditions which are not modified remain unchanged.
- (b) Bidders shall acknowledge receipt of any amendment to this solicitation
 - (1) by signing and returning the amendment,
 - (2) by identifying the amendment number and date in the space provided for this purpose on the form for submitting a bid,
 - (3) by letter or telegram or
 - (4) by facsimile, if facsimile bids are authorized in the solicitation. The Government must receive the acknowledgment by the time and at the place specified for receipt of bids. (FAR 52.214-3.)

15 CHANGES PRIOR TO OPENING BIDS.

The right is reserved, as the interest of the Government may require, to revise the specifications and/or drawings prior to the date set for opening bids. Such revisions will be announced by an amendment or amendments to this Invitation for Bids. **It shall be the responsibility of the prospective bidder to obtain copies of amendments from the website listed in paragraph: PLAN HOLDER'S LIST below.** The Government may (but not required) send an amendment notification to let prospective bidders know that an amendment has been issued. If the revisions and amendments are of a nature which requires material changes in quantities or prices to be bid, the date set for opening bids may be postponed as necessary, in the opinion of the Commander, to enable bidders to revise their bids. In such cases, the amendment will include an announcement of the new date for opening bids.

16 (FAR 52.214-34) SUBMISSION OF OFFERS IN THE ENGLISH LANGUAGE (APR 1991)

Offers submitted in response to this solicitation shall be in the English language. Offers received in other than English shall be rejected.
(End of provision)

17 (FAR 52.214-35) SUBMISSION OF OFFERS IN U.S. CURRENCY (APR 1991)

Offers submitted in response to this solicitation shall be in terms of U.S. dollars. Offers received in other than U.S. dollars shall be rejected.
(End of provision)

18 (EFARS 52.214-5000) ARITHMETIC DISCREPANCIES.

(a) For the purpose of initial evaluation of bids, the following will be utilized in resolving arithmetic discrepancies found on the face of the bidding schedule as submitted by the bidder:

- (1) Obviously misplaced decimal points will be corrected;
- (2) In case of discrepancy between unit price and extended price, the unit price will govern;
- (3) Apparent errors in extension of unit prices will be corrected;
- (4) Apparent errors in addition of lump sum and extended prices will be corrected.

(b) For the purposes of bid evaluation, the Government will proceed on the assumption that the bidder intends his bid to be evaluated on the basis

of the unit prices, extensions, and totals arrived at by resolution of arithmetic discrepancies as provided above and the bid will be so reflected on the abstract of bids.

(c) These correction procedures shall not be used to resolve any ambiguity concerning which bid is low.

19 (FAR 52.217-5) EVALUATION OF OPTIONS (JUL 1990).

Except when it is determined in accordance with FAR 17.206(b) not to be in the Government's best interests, the Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirement. Evaluation of options will not obligate the Government to exercise the option(s).

20 OPTIONS.

The Government may reject an offer as nonresponsive if it is materially unbalanced as to prices for the basic requirement and the option quantities. An offer is unbalanced when it is based on prices significantly less than cost for some work and prices which are significantly overstated for other work.

21 AVAILABILITY OF SPECIFICATIONS, STANDARDS, AND DESCRIPTIONS.

Specifications, standards, and descriptions cited in this solicitation are available as indicated below:

21.1 (FAR 52.211-2) AVAILABILITY OF SPECIFICATIONS LISTED IN THE DOD INDEX OF SPECIFICATIONS AND STANDARDS (DODISS) AND DESCRIPTIONS LISTED IN THE ACQUISITION MANAGEMENT SYSTEMS AND DATA REQUIREMENTS CONTROL LIST, DOD 5010.12-L (DEC 2003).

Copies of specifications, standards, and data item descriptions cited in this solicitation may be obtained—

(a) From the ASSIST database via the Internet at <http://assist.dla.mil>;
or

(b) By submitting a request to the—

Department of Defense Single Stock Point (DoDSSP)
Building 4, Section D
700 Robbins Avenue
Philadelphia, PA 19111-5094
Telephone (215) 697-2179
Facsimile (215) 697-1462.

(End of provision)

21.2 CORPS OF ENGINEERS SPECIFICATIONS.

Corps of Engineers specifications of the CRD-C series may be obtained from the National Institute of Building Sciences Construction Criteria Base (CCB) on CD-ROM. Contact the CCB directly at (202) 289-7800 for an order form or obtain an order form at the following internet address:
<http://www.ccb.org/ccbsubscribe/Subsmain.asp>. There is a regular annual

subscription fee to CCB of \$700 per year. (Note: This is considered to be the Contractor's responsibility and cost). This will include CCB on CD-ROM or DVD plus unlimited internet access plus access to the new Whole Building Design Guide, now under construction and scheduled for launch in October 2001. Selected Corps of Engineers specifications of CRD-C series are available in Acrobat Reader .pdf file format at the following internet address:
<http://www.wes.army.mil/SL/MTC/handbook/handbook.htm>.

21.3 COMMERCIAL (NON-GOVERNMENT) SPECIFICATIONS, STANDARDS, AND DESCRIPTIONS.

These specifications, standards, and descriptions are not available from Government sources. They may be obtained from the publishers.

22 AVAILABLE PLANT.

Each bidder shall, upon request of the Contracting Officer, furnish a list of the plant available to the bidder and proposed for use on the work.

23 EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE.

Whenever a contract or modification of contract price is negotiated, the Contractor's cost proposals for equipment ownership and operating expenses shall be determined in accordance with the requirements of paragraph: EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE, contained in Section: 00800, SPECIAL CONTRACT REQUIREMENTS of the specifications. A copy of EP 1110-1-8 "Construction Equipment Ownership and Operating Expense Schedule" is available for review at the office listed in paragraph: SITE VISIT (CONSTRUCTION) herein or at the following internet address:
<http://www.usace.army.mil/inet/usace-docs/eng-pamphlets/ep.htm>.
(copy also included on CD-ROM issued with this solicitation).

24 NOTICE REGARDING BUY AMERICAN ACT.

The Buy American Act (41 U.S.C. 10a-10d) generally requires that only domestic construction material be used in the performance of this contract. Exception from the Buy American Act shall be permitted only in the case of nonavailability of domestic construction materials. A bid or proposal offering nondomestic construction material will not be accepted unless specifically approved by the Government. When a bidder or offeror proposes to furnish nondomestic construction material, his bid or proposal must set forth an itemization of the quantity, unit price, and intended use of each item of such nondomestic construction material. When offering nondomestic construction material pursuant to this paragraph, bids or proposals may also offer, at stated prices, any available comparable domestic construction material, so as to avoid the possibility that failure of a nondomestic construction material to be acceptable under this paragraph will cause rejection of the entire bid. All bidders are cautioned that, prior Government conduct notwithstanding, the Contractor's selection of a domestic construction material (as defined in FAR 52.225-5 Buy American Act-Construction Materials) which would require the subsequent selection of a foreign construction material for compatibility is not a justification for waiver of the Buy American Act. It is the Contractor's responsibility to verify, prior to submitting the materials for approval, that each system can be built to meet the contract specifications without the use of foreign

construction materials.

25 NEBRASKA SALES AND USE TAX.

Materials installed under this contract are not exempt and the tax must be included in the amount bid. Telephone: (402) 595-2065 (Department of Revenue-Omaha).

26 (FAR 52.236-27) SITE VISIT (CONSTRUCTION) (FEB 1995).

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

(b) Contractors interested in inspecting the site of the proposed work should contact Steve Rasmussen at the Area Engineer's Office, Fort Crook Area, U.S. Army Corps of Engineers, P.O. Box 13287, Bldg. 527, Offutt AFB, Omaha, Nebraska 68113, Telephone 402-293-2511.

27 BIDDER'S QUESTIONS AND COMMENTS.

Questions and/or comments relative to these bidding documents should be submitted via e-mail or mailed to the address identified in paragraph: AVAILABILITY OF BID RESULTS below. Comments should reach this office no later than 20 calendar days prior to the date set for opening of bids, if feasible, in order that changes, if needed, may be added by amendment. E-mail addresses, FAX numbers, items for question and points of contact are listed below. Phone calls with questions should be made between 8:30 a.m. and 3:30 p.m. (Central Standard Time) Monday through Friday.

Note: A courtesy copy of all questions shall be sent to the Contract Specialist (Contractual Matters Point of Contact), the Program Manager and Specifications Section (Technical Content Points of Contact).

<u>Items for Question</u>	<u>Points of Contact/ Phone numbers/ FAX Numbers</u>	<u>E-mail Addresses</u>
Contractual Matters: Ordering CD-Rom of the plans and specifications (limit One per firm)/ amendments**/ Bid Results (See Paragraph AVAILABILITY OF BID RESULTS, below)/ Receipt of Bids	Cindy Siford 402-221-4824 (phone) 402-221-4199 (Fax)	Cindy.M.Siford@usace.army.mil
Planholder's List	See paragraph: PLAN HOLDER'S LIST, below.	
Small Business Matters	Hubert Carter 402-221-4110 (phone)	hubert.j.carter@usace.army.mil

following information be submitted with your bid. This facilitates the award process.

1. Financial
 - Name, address, and fax number of Financial Institution
 - Name and phone number of finance individual (primary and alternate) to be contacted for information
2. Bonding Information
 - Provide the name, address, regular phone number and fax number of your Surety Company.
3. Performance
 - Provide three (3) references to be contacted on your company's performance

The following information should be submitted:

 - Name and Fax number of Owner/User
 - Project Name, Location, Contract Number, and dollar value
 - Name and phone number of individuals (primary and alternate) that can verify performance of the project

30 DATA UNIVERSAL NUMBERING SYSTEM (DUNS) NUMBER

(a) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation "DUNS" followed by the DUNS number that identifies the offeror's name and address exactly as stated in the offer. The DUNS number is a nine-digit number assigned by Dun and Bradstreet Information Services.

(b) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one. A DUNS number will be provided immediately by telephone at no charge to the offeror. For information on obtaining a DUNS number, the offeror, if located within the United States, should call Dun and Bradstreet at 1-800-333-0505. The offeror should be prepared to provide the following information:

- (1) Company name.
- (2) Company address.
- (3) Company telephone number.
- (4) Line of business.
- (5) Chief executive officer/key manager.
- (6) Date the company was started.
- (7) Number of people employed by the company.
- (8) Company affiliation.

(c) Offerors located outside the United States may obtain the location and phone number of the local Dun and Bradstreet Information Services office from the Internet home page at <http://www.customerservice@dnb.com>. If an offeror is unable to locate a local service center, it may send an e-mail to

Dun and Bradstreet at globalinfo@mail.dnb.com. (End of provision)

31 (FAR 52.216-1) TYPE OF CONTRACT (APR 1984).

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

32 SUBCONTRACTING PLAN/SUBCONTRACTING GOALS REGARDING THE UTILIZATION OF SMALL BUSINESS CONCERNS.

a. Application. This clause applies only to large business concerns submitting bids for services exceeding \$500,000 or for construction exceeding \$1,000,000.

b. Federal Acquisition Regulations (FAR). Attention is directed to the following FAR and DFAR provisions contained in this solicitation:

52.219-8, Utilization of Small Business Concerns (Alternate I)

52.219-9, Small Business Subcontracting Plan (Alternate I)

52.219-16, Liquidated Damages - Small Business Subcontracting Plan

252.226-7001, Utilization Of Indian Organizations, Indian-Owned Economic Enterprises, And Native Hawaiian Small Business Concerns

c. Goals. The U.S. Army Corps of Engineers considers the following goals reasonable and achievable for fiscal year 2004 and for the performance of the resultant contract:

(1) 57.2% of planned subcontracting dollars with small business concerns.

(2) 10.0% of planned subcontracting dollars with those small business concerns owned and controlled by socially and economically disadvantaged individuals.

(3) 10.0% of planned subcontracting dollars with those small business concerns owned and controlled by women.

(4) 3.0% of planned subcontracting dollars with those small business concerns owned and controlled by Service-Disabled Veterans.

(5) 3.0% of planned subcontracting dollars with those small business concerns owned and controlled by HubZones.

d. Submission and Review of Subcontracting Plan.

SUBMISSION OF SMALL BUSINESS SUBCONTRACTING PLAN IS NOT APPLICABLE TO SMALL BUSINESSES.

(1) The apparent low bidder must submit a subcontracting plan within five (5) calendar days after bid opening (a longer period maybe granted by the Contracting Officer upon request) within 24 hours after notification by the Government to the Contracting Activity.

(2) Goals included in the subcontracting plan should be at

least equal to those indicated above. If lesser goals are proposed, the bidder may be required to substantiate how the proposed plan represents the bidder's best effort to comply with the terms and conditions of the solicitation. Bidders are highly encouraged to become familiar with the intent of the solicitation provisions and the elements of the subcontracting plan.

(3) The subcontracting plan must contain, as a minimum, the elements set forth in FAR provision 52.219-9. An example subcontracting plan will be furnished to the apparent low bidder (upon request). The example subcontracting plan (if requested) should not be construed as an acceptable subcontracting plan. Any format will be acceptable provided that the plan addresses each element as required by the Federal Acquisition Regulations and its supplements.

(4) Proposed plans will be reviewed by the Government to ensure the plan represents the firm's best efforts to maximize subcontracting opportunities for small, small disadvantaged and women-owned businesses.

(5) Subcontracting plans are required to be approved prior to Contract Award. The approved subcontracting plan (to include goals) will become a material part of the contract.

e. Failing to Submit An Acceptable Subcontracting Plan. An apparent low bidder failing to submit a subcontracting plan which demonstrates a reasonable effort to meet the goals listed above or provide an explanation why lesser goals are proposed (upon request), will be considered as non-responsive and not considered eligible for award of the contract.

f. Questions or Assistance Needed in Developing Subcontracting Plan. For any questions or assistance needed in developing the subcontracting plan, contact the Contract Specialist or District's Deputing for Small Business (See paragraph: BIDDER QUESTIONS AND COMMENTS, Contract Specialist [Bid Results] or the District's Deputy for Small Business [Small Business] or fax your inquiries to 402-221-4199).

33 52.219-3 Notice of Total HUBZone Set-Aside.

As prescribed in 19.1308(a), insert the following clause:

Notice of Total HUBZone Set-Aside (Jan 1999)

(a) *Definition.* "HUBZone small business concern," as used in this clause, means a small business concern that appears on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration.

(b) *General.*

(1) Offers are solicited only from HUBZone small business concerns. Offers received from concerns that are not HUBZone small business concerns shall not be considered.

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

(c) *Agreement.* A HUBZone small business concern agrees that in the performance of the contract, in the case of a contract for-

(1) Services (except construction), at least 50 percent of the cost of personnel for contract performance will be spent for employees of the concern or employees of other HUBZone small business concerns;

(2) Supplies (other than acquisition from a nonmanufacturer of the supplies), at least 50 percent of the cost of manufacturing, excluding the cost of materials, will be performed by the concern or other HUBZone small business concerns;

(3) General construction, at least 15 percent of the cost of the contract performance incurred for personnel will be spent on the concern's employees or the employees of other HUBZone small business concerns; or

(4) Construction by special trade contractors, at least 25 percent of the cost of the contract performance incurred for personnel will be spent on the concern's employees or the employees of other HUBZone small business concerns.

(d) A HUBZone joint venture agrees that, in the performance of the contract, the applicable percentage specified in paragraph (c) of this clause will be performed by the HUBZone small business participant or participants.

(e) A HUBZone small business concern nonmanufacturer agrees to furnish in performing this contract only end items manufactured or produced by HUBZone small business manufacturer concerns. This paragraph does not apply in connection with construction or service contracts.

(End of clause)

REQUIRED CENTRAL CONTRACTOR REGISTRATION (CCR)

Register Now: Don't wait until you submit an offer on a solicitation. You must be registered to receive the contract award. It can often take 30 days for CCR to process your registration information.

Register One of Three Ways:

Internet: <http://www.ccr.gov>

Value Added Network (VAN) for EDI users:

Contact your VAN for information. If you need to find a VAN look at

http://www.acq.osd.mil/ec/ecip/van_list.htm

FAX or Mail: Call (888)227-2423 or (616)961-4725 to receive a registration package. FAX or mail the completed information to the CCR Assistance Center. It can take up to 30 days to process a faxed or mailed package.

CCR Assistance Center

74 Washington Street North, Suite 7

Battle Creek, MI 49017-3084

FAX: (616)961-7243

SECTION 00600
REPRESENTATIONS, CERTIFICATIONS & OTHER STATEMENTS OF BIDDERS

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SECTION 00600
REPRESENTATIONS, CERTIFICATIONS & OTHER STATEMENTS OF BIDDERS

The bidder (offeror) makes the following certification and representations as a part of the bid, shall check the appropriate boxes, fill in the appropriate information, and provide signatures on the attached "Solicitation Form" (00600) pages, and submit with Standard Form 1442 (Section 00010).

1. (FAR 52.203-2) CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (APR 1985).

(a) The offeror certifies that -

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to (i) those prices, (ii) the intention to submit an offer, or (iii) the methods or factors used to calculate the prices offered;

(2) the prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a Sealed Bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) no attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory -

(1) is the person in the offeror's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above; or

(2)(i) has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above

_____ [insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization];

(ii) as an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) as an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above.

(c) If the offeror deletes or modifies subparagraph (a)(2) above, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

2. (FAR 52.203-11) CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (APR 1991).

(a) The definitions and prohibitions contained in the clause, at FAR 52.203-12, Limitation on Payments to Influence Certain Federal Transactions, included in this solicitation, are hereby incorporated by reference in paragraph (b) of this certification.

(b) The offeror, by signing its offer, hereby certifies to the best of his or her knowledge and belief that on or after December 23, 1989, -

(1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement;

(2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the offeror shall complete and submit, with its offer, OMB standard form LLL, Disclosure of Lobbying Activities, to the Contracting Officer; and

(3) He or she will include the language of this certification in all subcontract awards at any tier and require that all recipients of subcontract awards in excess of \$100,000 shall certify and disclose accordingly.

(c) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, United States Code. Any person who makes an expenditure prohibited under this provision or who fails to file or amend the disclosure form to be filed or amended by this provision, shall be subject to a civil penalty of not less than \$10,000, and not more than \$100,000, for each such failure.

3. TAXPAYER IDENTIFICATION (Local Provison).

(a) Definitions.

"Common parent," as used in this provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

"Taxpayer Identification Number (TIN)," as used in this provision, means the number required by the Internal Revenue Service (IRS) to be used by the offeror in reporting income tax and other returns. The TIN may be either a Social Security Number or an Employer Identification Number.

(b) All offerors must submit the information required in paragraphs (d) through (f) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the IRS. If the resulting contract is subject to the payment reporting requirements described in Federal Acquisition Regulation (FAR) 4.904, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments otherwise due under the contract.

(c) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(d) Taxpayer Identification Number (TIN).

TIN: _____.

TIN has been applied for.

TIN is not required because:

Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;

Offeror is an agency or instrumentality of a foreign government;

Offeror is an agency or instrumentality of the Federal Government.

(e) Type of organization.

Sole proprietorship;

Partnership;

Corporate entity (not tax-exempt);

Corporate entity (tax-exempt);

Government entity (Federal, State, or local);

Foreign government;

International organization per 26 CFR 1.6049-4;

Other _____.

(f) Common parent.

Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this provision.

Name and TIN of common parent:

Name _____

TIN _____

(End of provision)

4. (FAR 52.204-5) WOMEN-OWNED BUSINESS (OTHER THAN SMALL BUSINESS)
[MAY 1999]

(a) *Definition.* Women-owned business concern, as used in this provision, means a concern that is

at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of its stock is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

(b) *Representation.* [Complete only if the offeror is a women-owned business concern and has not represented itself as a small business concern in paragraph (b)(1) of FAR 52.219-1, *Small Business Program Representations*, of this solicitation.] The offeror represents that it [] is a women-owned business concern.

(End of provision)

5. (DFARS 252.204-7001) COMMERCIAL AND GOVERNMENT ENTITY (CAGE) CODE REPORTING (AUG 1999).

(a) The offeror is requested to enter its CAGE code on its offer in the block with its name and address. The CAGE code entered must be for that name and address. Enter “CAGE” before the number.

(b) If the offeror does not have a CAGE code, it may ask the Contracting Officer to request one from the Defense Logistics Information Service (DLIS). The Contracting Officer will-

(1) Ask the Contractor to complete section B of a DD Form 2051, Request for Assignment of a Commercial and Government Entity (CAGE) Code;

(2) Complete section A and forward the form to DLIS; and

(3) Notify the Contractor of its assigned CAGE code.

(c) Do not delay submission of the offer pending receipt of a CAGE code.

6. (FAR 52.209-5) CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS (DEC 2001).

(a)(1) The Offeror certifies, to the best of its knowledge and belief, that—

(i) The Offeror and/or any of its Principals—

(A) Are [] are not [] presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(B) Have [] have not [], within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(C) Are [] are not [] presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in paragraph (a)(1)(i)(B) of this provision.

(ii) The Offeror has [] has not [], within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) “Principals,” for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

This Certification Concerns a Matter Within the Jurisdiction of an Agency of the United States and the Making of a False, Fictitious, or Fraudulent Certification May Render the Maker Subject

to Prosecution Under Section 1001, Title 18, United States Code.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default. (End of Provision)

7. (DFARS 252.209-7001) DISCLOSURE OF OWNERSHIP OR CONTROL BY A FOREIGN GOVERNMENT THAT SUPPORTS TERRORISM (MAR 1998). [For Contracts exceeding \$100,000]

(a) Definitions.

As used in this provision-

(1) "Government of a terrorist country" includes the state and the government of a terrorist country, as well as any political subdivision, agency, or instrumentality thereof.

(2) "Terrorist country" means a country determined by the Secretary of State, under section 6(j)(1)(A) of the Export Administration Act of 1979 (50 U.S.C. App. 2405(j)(i)(A)), to be a country the government of which has repeatedly provided support for acts of international terrorism. As of the date of this provision, terrorist countries include: Cuba, Iran, Iraq, Libya, North Korea, Sudan, and Syria.

(3) "Significant interest" means-

(i) Ownership of or beneficial interest in 5 percent or more of the firm's or subsidiary's securities. Beneficial interest includes holding 5 percent or more of any class of the firm's securities in "nominee shares," "street names," or some other method of holding securities that does not disclose the beneficial owner;

(ii) Holding a management position in the firm, such as a director or officer;

(iii) Ability to control or influence the election, appointment, or tenure of directors or officers in the firm;

(iv) Ownership of 10 percent or more of the assets of a firm such as equipment, buildings, real estate, or other tangible assets of the firm; or

(v) Holding 50 percent or more of the indebtedness of a firm.

(b) Prohibition on award. In accordance with 10 U.S.C. 2327, no contract may be awarded to a firm or a subsidiary of a firm if the government of a terrorist country has a significant interest in the firm or subsidiary [or, in the case of a subsidiary, the firm that owns the subsidiary], unless a waiver is granted by the Secretary of Defense.

(c) Disclosure.

The Offeror shall disclose any significant interest the government of each of the following countries has in the Offeror or a subsidiary of the Offeror. If the Offeror is a subsidiary, it shall also disclose any significant interest the government of a terrorist country has in any firm that owns or controls the subsidiary. The disclosure shall include--

- (1) Identification of each government holding a significant interest; and
- (2) A description of the significant interest held by each Government.

(End of provision)

8. (FAR 52.211-6) BRAND NAME OR EQUAL (AUG 1999).

(a) If an item in this solicitation is identified as "brand name or equal," the purchase description reflects the characteristics and level of quality that will satisfy the Government's needs. The salient physical, functional, and other characteristics that "equal" products must meet are specified in the solicitation.

(b) To be considered for award, offers of "equal" products, including "equal" products of the brand name manufacturer, must--

(1) Meet the salient physical, functional, and other characteristics specified in the solicitation;

(2) Clearly identify the item by--

(i) Brand name, if any; and

(ii) Make or model number;

(3) Include descriptive literature such as cuts, illustrations, drawings, or a clear reference to previously furnished descriptive data or information available to the Contracting Officer; and

(4) Clearly describe any modifications the offeror plans to make in a product to make it conform to the solicitation requirements. Mark any descriptive material to clearly show the modifications.

(c) The Contracting Officer will evaluate "equal" products on the basis of information by the offeror or identified in the offer and reasonably available to the Contracting Officer. The Contracting Officer is not responsible for locating or securing any information not identified in the offer.

(d) Unless the offeror clearly indicates in its offer that the product being offered is an "equal" product, the offeror shall provide the brand name product referenced in the solicitation.

9. RESERVED

10. RESERVED

**11. (FAR 52.219-1) SMALL BUSINESS PROGRAM REPRESENTATIONS (MAY 2004)
ALTERNATE I (APR 2002)**

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is _____ [insert NAICS code].

(2) The small business size standard is _____ [insert size standard].

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

(b) *Representations.* (1) The offeror represents as part of its offer that it [] is, [] is not a small

business concern.

(2) [Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.] The offeror represents, for general statistical purposes, that it [] is, [] is not, a small disadvantaged business concern as defined in 13 CFR 124.1002.

(3) [Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.] The offeror represents as part of its offer that it [] is, [] is not a women-owned small business concern.

(4) [Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.] The offeror represents as part of its offer that it [] is, [] is not a veteran-owned small business concern.

(5) [Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (b)(4) of this provision.] The offeror represents as part of its offer that it [] is, [] is not a service-disabled veteran-owned small business concern.

(6) [Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.] The offeror represents, as part of its offer, that—

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

(ii) It [] is, [] is not a joint venture that complies with the requirements of 13 CFR part 126, and the representation in paragraph (b)(6)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating in the joint venture. [The offeror shall enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture:_____.] Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(7) [Complete if offeror represented itself as disadvantaged in paragraph (b)(2) of this provision.]

The offeror shall check the category in which its ownership falls:

- _____ Black American.
- _____ Hispanic American.
- _____ Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians).
- _____ Asian-Pacific American (persons with origins from Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Japan, China, Taiwan, Laos, Cambodia (Kampuchea), Vietnam, Korea, The Philippines, U.S. Trust Territory of the Pacific Islands (Republic of Palau), Republic of the Marshall Islands, Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, Guam, Samoa, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or Nauru).
- _____ Subcontinent Asian (Asian-Indian) American (persons with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives Islands, or Nepal).
- _____ Individual/concern, other than one of the preceding.

(c) *Definitions.* As used in this provision—

“Service-disabled veteran-owned small business concern”—

(1) Means a small business concern—

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a service-disabled veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service connected, as defined in 38 U.S.C. 101(16).

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

“Veteran-owned small business concern” means a small business concern—

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

“Women-owned small business concern” means a small business concern—

(1) That is at least 51 percent owned by one or more women; or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

(d) *Notice.* (1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.

(2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small, HUBZone small, small disadvantaged, or women-owned small business concern in order to obtain a contract to be awarded under the preference programs established pursuant to section 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall—

(i) Be punished by imposition of fine, imprisonment, or both;

(ii) Be subject to administrative remedies, including suspension and debarment;

and

(iii) Be ineligible for participation in programs conducted under the authority of

the Act.

(End of provision)

12. (FAR 52.219-2) EQUAL LOW BIDS (OCT 1995)

(a) This provision applies to small business concerns only.

(b) The bidder's status as a labor surplus area (LSA) concern may affect entitlement to award in case of tie bids. If the bidder wishes to be considered for this priority, the bidder must identify, in the following space, the LSA in which the costs to be incurred on account of manufacturing or production (by the bidder or the first-tier subcontractors) amount to more than 50 percent of the contract price.

(c) Failure to identify the labor surplus areas as specified in paragraph (b) of this provision will preclude the bidder from receiving priority consideration. If the bidder is awarded a contract as a result of receiving priority consideration under this provision and would not have otherwise received award, the bidder shall perform the contract or cause the contract to be performed in accordance with the obligations of an LSA concern.

13. RESERVED

14. (FARS 52.219-19) SMALL BUSINESS CONCERN REPRESENTATION FOR THE SMALL BUSINESS COMPETITIVENESS DEMONSTRATION PROGRAM (OCT 2000).

(a) *Definition.* “Emerging small business” as used in this solicitation, means a small business concern whose size is no greater than 50 percent of the numerical size standard applicable to the North American Industry Classification System (NAICS) code assigned to a contracting opportunity.

(b) (Complete only if Offeror has represented itself under the provision at FAR 52.219-1 as a small business concern under the size standards of this solicitation.) The Offeror [] is, [] is not an emerging small business.

(c) (Complete only if the Offeror is a small business or an emerging small business, indicating its size range.)

Offeror's number of employees for the past 12 months (check this column if size standard stated in solicitation is expressed in terms of number of employees) or Offeror's average annual gross revenue for the last 3 fiscal years (check this column if size standard stated in solicitation is expressed in terms of annual receipts). (Check one of the following.)

No. of Employees	Average Annual Gross Revenues
____ 50 or fewer	____ \$1 million or less
____ 51 - 100	____ \$1,000,001 - \$2 million
____ 101 - 250	____ \$2,000,001 - \$3.5 million
____ 251 - 500	____ \$3,500,001 - \$5 million
____ 501 - 750	____ \$5,000,001 - \$10 million
____ 751 - 1,000	____ \$10,000,001 - \$17 million
____ Over 1,000	____ Over \$17 million

15. (FARS 52.219-21) SMALL BUSINESS SIZE REPRESENTATION FOR TARGETED INDUSTRY CATEGORIES UNDER THE SMALL BUSINESS COMPETITIVENESS DEMONSTRATION PROGRAM (MAY 1999).

[Complete only if the Offeror has represented itself under the provision at 52.219-1 as a small business concern under the size standards of this solicitation.]

Offeror's number of employees for the past 12 months *[check this column if size standard stated in solicitation is expressed in terms of number of employees]* or Offeror's average annual gross revenue for the last 3 fiscal years *[check this column if size standard in solicitation is expressed in terms of annual receipts]*. *[Check one of the following.]*

No. of Employees	Average Annual Gross Revenues
____ 50 or fewer	____ \$1 million or less
____ 51 - 100	____ \$1,000,001 - \$2 million
____ 101 - 250	____ \$2,000,001 - \$3.5 million
____ 251 - 500	____ \$3,500,001 - \$5 million
____ 501 - 750	____ \$5,000,001 - \$10 million
____ 751 - 1,000	____ \$10,000,001 - \$17 million
____ Over 1,000	____ Over \$17 million

16. (FAR 52.222-21)

CERTIFICATION OF NONSEGREGATED FACILITIES (FEB 1999)

(a) "Segregated facilities," as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.

(b) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Opportunity clause in this contract.

(c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Opportunity clause of this contract.
(End of clause)

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

The offeror represents that—

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

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

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

18. (FAR 52.223-4) RECOVERED MATERIAL CERTIFICATION (OCT 1997)

As required by the Resource Conservation and Recovery Act of 1976 (42 U.S.C. 6962(c)(3)(A)(i)), the offeror certifies, by signing this offer, that the percentage of recovered materials to be used in the performance of the contract will be at least the amount required by the applicable contract specifications.
(End of provision)

19. (FAR 52.223-13) CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING (AUG 2003) [For Contracts over \$100,000]

(a) Executive Order 13148, of April 21, 2000, Greening the Government through Leadership in Environmental Management, requires submission of this certification as a prerequisite for contract award.

(b) By signing this offer, the offeror certifies that—

(1) As the owner or operator of facilities that will be used in the performance of this contract that are subject to the filing and reporting requirements described in section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023) and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106), the offeror will file and continue to file for such facilities for the life of the contract the Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of EPCRA and section 6607 of PPA; or

(2) None of its owned or operated facilities to be used in the performance of this contract is subject to the Form R filing and reporting requirements because each such facility is exempt for at least one of the following reasons: [*Check each block that is applicable.*]

(i) The facility does not manufacture, process, or otherwise use any toxic chemicals listed in 40 CFR 372.65;

(ii) The facility does not have 10 or more fulltime employees as specified in section 313(b)(1)(A) of EPCRA, 42 U.S.C. 11023(b)(1)(A);

(iii) The facility does not meet the reporting thresholds of toxic chemicals established under section 313(f) of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

(iv) The facility does not fall within the following Standard Industrial Classification (SIC) codes or their corresponding North American Industry Classification System sectors:

(A) Major group code 10 (except 1011, 1081, and 1094).

(B) Major group code 12 (except 1241).

(C) Major group codes 20 through 39.

(D) Industry code 4911, 4931, or 4939 (limited to facilities that combust coal and/or oil for the purpose of generating power for distribution in commerce).

(E) Industry code 4953 (limited to facilities regulated under the Resource Conservation and Recovery Act, Subtitle C (42 U.S.C. 6921, *et seq.*), or 5169, or 5171, or 7389 (limited to facilities primarily engaged in solvent recovery services on a contract or fee basis); or

(v) The facility is not located in the United States or its outlying areas..

(End of provision)

20. (DFARS 252.225-7031) SECONDARY ARAB BOYCOTT OF ISRAEL (APR 2003)

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

(1) "Foreign person" means any person (including any individual, partnership, corporation, or other form of association) other than a United States person.

(2) "United States person" is defined in 50 U.S.C. App. 2415(2) and means-

(i) Any United States resident or national (other than an individual resident outside the United States who is employed by other than a United States person);

(ii) Any domestic concern (including any permanent domestic establishment of any foreign concern); and

(iii) Any foreign subsidiary or affiliate (including any permanent foreign establishment) of any domestic concern that is controlled in fact by such domestic concern.

(b) *Certification.* If the offeror is a foreign person, the offeror certifies, by submission of an offer, that it-

(1) Does not comply with the Secondary Arab Boycott of Israel; and

(2) Is not taking or knowingly agreeing to take any action, with respect to the Secondary Boycott of Israel by Arab countries, which 50 U.S.C. App. 2407(a) prohibits a United States person from taking.

(End of Provision)

21. (DFARS 252.247-7022) REPRESENTATION OF EXTENT OF TRANSPORTATION BY SEA (AUG 1992).

(a) The Offeror shall indicate by checking the appropriate blank in paragraph (b) of this provision whether transportation of supplies by sea is anticipated under the resultant contract. The term "supplies" is defined in the Transportation of Supplies by Sea clause of this solicitation.

(b) REPRESENTATION. The Offeror represents that it-

_____ Does anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

_____ Does not anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

(c) Any contract resulting from this solicitation will include the Transportation of Supplies by Sea Clause. If the Offeror represents that it will not use ocean transportation, the resulting contract will also include the Defense FAR Supplement clause at 252.247-7024, Notification of Transportation of Supplies by Sea.

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SECTION 00700

CONTRACT CLAUSES

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53. *FAR 52.223-5 POLLUTION PREVENTION AND RIGHT-TO-KNOW INFORMATION (AUG 2003) [For Work on Federal Facilities]
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55. FAR 52.223-9 ESTIMATE OF PERCENTAGE OF RECOVERED MATERIAL CONTENT FOR EPA-DESIGNATED PRODUCTS (AUG 2000) [For Contracts exceeding \$100,000. EPA Designated product (available at <http://www.epa.gov/cpg/>)]
56. *FAR 52.223-14 TOXIC CHEMICAL RELEASE REPORTING (AUG 2003) [For Contracts Over \$100,000]
57. RESERVED
58. DFARS 252.223-7006 PROHIBITION ON STORAGE AND DISPOSAL OF TOXIC AND HAZARDOUS MATERIALS (APR 1993)
59. *FAR 52.225-9 BUY AMERICAN ACT—CONSTRUCTION MATERIALS (JUNE 2003) (For Contracts less than \$6.481 million)
60. *FAR 52.225-10 NOTICE OF BUY AMERICAN ACT REQUIREMENT—CONSTRUCTION MATERIALS (MAY 2002) (Applicable with FAR 52.225-9)
61. *FAR 52.225-11 BUY AMERICAN ACT—CONSTRUCTION MATERIALS UNDER TRADE AGREEMENTS (JUNE 2004) [For Contracts more than \$6,481,000] ALTERNATE I (JAN 2004) [For Contracts between \$6.481 and 7.304733 Million]

62. *FAR 52.225-12 NOTICE OF BUY AMERICAN ACT REQUIREMENT—CONSTRUCTION MATERIALS UNDER TRADE AGREEMENTS (JAN 2004) [Applicable with FAR 52.225-11] ALTERNATE II (JAN 2004) [For Contracts Between 6.481 and 7.344733 Million]
63. *FAR 52.225-13 RESTRICTIONS ON CERTAIN FOREIGN PURCHASES (DEC 2003)
64. DFARS 252.226-7001 UTILIZATION OF INDIAN ORGANIZATIONS, INDIAN-OWNED ECONOMIC ENTERPRISES, AND NATIVE HAWAIIAN SMALL BUSINESS CONCERNS (OCT 2003)
65. *FAR 52.227-1 AUTHORIZATION AND CONSENT (JUL 1995)
66. *FAR 52.227-2 NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (AUG 1996)
67. *FAR 52.227-4 PATENT INDEMNITY--CONSTRUCTION CONTRACTS (APR 1984)
68. DFARS 252.227-7033 RIGHTS IN SHOP DRAWINGS (APR 1966)
69. FAR 52.228-1 BID GUARANTEE (SEP 1996) [NOTE: Not required for projects less than \$100,000]
70. *FAR 52.228-2 ADDITIONAL BOND SECURITY (OCT 1997)
71. *FAR 52.228-5 INSURANCE--WORK ON A GOVERNMENT INSTALLATION (JAN 1997) [For Contracts Exceeding \$100,000]
72. *FAR 52.228-11 PLEDGES OF ASSETS (FEB 1992)
73. *FAR 52.228-12 PROSPECTIVE SUBCONTRACTOR REQUESTS FOR BONDS (OCT 1995)
74. FAR 52.228-13 ALTERNATIVE PAYMENT PROTECTIONS (JULY 2000) [Applicable only for projects or delivery orders less than \$100,000]
75. FAR 52.228-14 IRREVOCABLE LETTER OF CREDIT (DEC 1999)
76. FAR 52.228-15 PERFORMANCE AND PAYMENT BONDS (JULY 2000).
77. FAR 52.229-3 FEDERAL, STATE, AND LOCAL TAXES (APR 2003) [For Contracts Exceeding \$100,000]
78. RESERVED
79. DFARS 252.231-7000 SUPPLEMENTAL COST PRINCIPLES (DEC 1991)
80. *FAR 52.232-5 PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS (SEPT 2002)
81. RESERVED.
82. *FAR 52.232-17 INTEREST (JUN 1996)
83. *FAR 52.232-23 ASSIGNMENT OF CLAIMS (JAN 1986)
84. *FAR 52.232-27 PROMPT PAY FOR CONSTRUCTION CONTRACTS (OCT 2003)
85. *FAR 52.232-33 PAYMENT BY ELECTRONIC FUNDS TRANSFER –CENTRAL CONTRACTOR REGISTRATION (OCT 2003)
86. DFARS 252.232-7004 DOD PROGRESS PAYMENT RATES (OCT 2001)
87. DFARS 252.232-7005 REIMBURSEMENT OF SUBCONTRACTOR ADVANCE PAYMENTS--DOD PILOT MENTOR-PROTEGE PROGRAM (SEP 2001)
88. *FAR 52.233-1 DISPUTES (JULY 2002)
89. *FAR 52.233-3 PROTEST AFTER AWARD (AUG 1996)
90. RESERVED
91. FAR 52.236-2 DIFFERING SITE CONDITIONS (APR 1984)
92. *FAR 52.236-3 SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK (APR 1984)
93. *FAR 52.236-5 MATERIAL AND WORKMANSHIP (APR 1984)
94. RESERVED
95. *FAR 52.236-6 SUPERINTENDENCE BY THE CONTRACTOR (APR 1984)
96. FAR 52.236-7 PERMITS AND RESPONSIBILITIES (NOV 1991)
97. *FAR 52.236-8 OTHER CONTRACTS (APR 1984)
98. *FAR 52.236-9 PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS (APR 1984)
99. *FAR 52.236-10 OPERATIONS AND STORAGE AREAS (APR 1984)
100. *FAR 52.236-11 USE AND POSSESSION PRIOR TO COMPLETION (APR 1984)
101. *FAR 52.236-12 CLEANING UP (APR 1984)
102. *FAR 52.236-13 ACCIDENT PREVENTION-ALTERNATE I (NOV 1991)
103. *FAR 52.236-14 AVAILABILITY AND USE OF UTILITY SERVICES (APR 1984)
104. FAR 52.236-15 SCHEDULES FOR CONSTRUCTION CONTRACTS (APR 1984)
105. *FAR 52.236-17 LAYOUT OF WORK (APR 1984)

106. FAR 52.236-21 SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION (FEB 1997)
107. *FAR 52.236-26 PRECONSTRUCTION CONFERENCE (FEB 1995)
108. DFARS 252.236-7000 MODIFICATION OF PROPOSALS - PRICE BREAKDOWN (DEC 1991)
109. DFARS 252.236-7008 CONTRACT PRICES - BIDDING SCHEDULES (DEC 1991)
110. *FAR 52.242-13 BANKRUPTCY (JUL 1995)
111. *FAR 52.242-14 SUSPENSION OF WORK (APR 1984)
112. FAR 52.243-4 CHANGES (AUG 1987)
113. DFARS 252.243-7001 PRICING OF CONTRACT MODIFICATIONS (DEC 1991)
114. DFARS 252.243-7002 REQUESTS FOR EQUITABLE ADJUSTMENT (MAR 1998)
115. *FAR 52.244-2 SUBCONTRACTS (AUG 1998)
116. FAR 52.244-6 SUBCONTRACTS FOR COMMERCIAL ITEMS (JULY 2004)
117. *FAR 52.245-2 GOVERNMENT PROPERTY (FIXED-PRICE CONTRACTS) (MAY 2004) [For Government Property over \$100,000]
118. *FAR 52.245-4 GOVERNMENT-FURNISHED PROPERTY (SHORT FORM) (JUNE 2003) [For Government Property \$100,000 or Less]
119. *FAR 52.246-12 INSPECTION OF CONSTRUCTION (AUG 1996)
120. *FAR 52.246-21 WARRANTY OF CONSTRUCTION (MAR 1994)
121. DFARS 252.247-7023 TRANSPORTATION OF SUPPLIES BY SEA (MAR 2000)
122. DFARS 252.247-7024 NOTIFICATION OF TRANSPORTATION OF SUPPLIES BY SEA (MAR 2000)
123. FAR 52.248-3 VALUE ENGINEERING--CONSTRUCTION (FEB 2000) (ALTERNATE I (APR 1984)
124. *FAR 52.249-1 TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE) (SHORT FORM) (APR 1984) [For Contracts \$100,000 or Less]
125. *FAR 52.249-2 TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE) (MAY 2004) ALTERNATE I (SEP 1996) [For Contracts Over \$100,000]
126. *FAR 52.249-10 DEFAULT (FIXED-PRICE CONSTRUCTION) (APR 1984)
127. ENVIRONMENTAL LITIGATION (1974 NOV OCE)
128. EFARS 52.249-5000 BASIS FOR SETTLEMENT OF PROPOSALS
129. INAPPLICABLE PROVISIONS AND CLAUSES (Local Provision). [Applicable only for projects or delivery orders less than \$100,000]

SECTION 00700

CONTRACT CLAUSES

1. FAR 52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

<http://www.arnet.gov/far>

(End of clause)

* - CONTRACT CLAUSES THAT MAY BE INCORPORATED BY REFERENCE

2. DFARS 252.201-7000 CONTRACTING OFFICER'S REPRESENTATIVE (DEC 1991)

(a) Definition.

"Contracting officer's representative" means an individual designated in accordance with subsection 201.602-2 of the Defense Federal Acquisition Regulation Supplement and authorized in writing by the contracting officer to perform specific technical or administrative functions.

(b) If the Contracting Officer designates a contracting officer's representative (COR), the Contractor will receive a copy of the written designation. It will specify the extent of the COR's authority to act on behalf of the contracting officer. The COR is not authorized to make any commitments or changes that will affect price, quality, quantity, delivery, or any other term or condition of the contract.

(End of clause)

3. *FAR 52.202-1 DEFINITIONS (JULY 2004)

(a) When a solicitation provision or contract clause uses a word or term that is defined in the Federal Acquisition Regulation (FAR), the word or term has the same meaning as the definition in FAR 2.101 in effect at the time the solicitation was issued, unless—

(1) The solicitation, or amended solicitation, provides a different definition;

(2) The contracting parties agree to a different definition;

(3) The part, subpart, or section of the FAR where the provision or clause is prescribed provides a different meaning; or

(4) The word or term is defined in FAR Part 31, for use in the cost principles and procedures.

(b) The FAR Index is a guide to words and terms the FAR defines and shows where each definition is located. The FAR Index is available via the Internet at <http://www.acqnet.gov> at the end of the FAR, after the FAR Appendix.

(End of clause)

4. *FAR 52.203-3 GRATUITIES (APR 1984)

(a) The right of the Contractor to proceed may be terminated by written notice if, after notice and hearing, the agency head or a designee determines that the Contractor, its agent, or another representative--

(1) Offered or gave a gratuity (e.g., an entertainment or gift) to an officer, official, or employee of the Government; and

(2) Intended, by the gratuity, to obtain a contract or favorable treatment under a contract.

- (b) The facts supporting this determination may be reviewed by any court having lawful jurisdiction.
- (c) If this contract is terminated under paragraph (a) above, the Government is entitled--
 - (1) To pursue the same remedies as in a breach of the contract; and
 - (2) In addition to any other damages provided by law, to exemplary damages of not less than 3 nor more than 10 times the cost incurred by the Contractor in giving gratuities to the person concerned, as determined by the agency head or a designee. (This subparagraph (c)(2) is applicable only if this contract uses money appropriated to the Department of Defense.)
- (d) The rights and remedies of the Government provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.

5. *FAR 52.203-5 COVENANT AGAINST CONTINGENT FEES (APR 1984)

(a) The Contractor warrants that no person or agency has been employed or retained to solicit or obtain this contract upon an agreement or understanding for a contingent fee, except a bona fide employee or agency. For breach or violation of this warranty, the Government shall have the right to annul this contract without liability or, in its discretion, to deduct from the contract price or consideration, or otherwise recover, the full amount of the contingent fee.

(b) "Bona fide agency," as used in this clause, means an established commercial or selling agency, maintained by a contractor for the purpose of securing business, that neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds itself out as being able to obtain any Government contract or contracts through improper influence.

"Bona fide employee," as used in this clause, means a person, employed by a contractor and subject to the contractor's supervision and control as to time, place, and manner of performance, who neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds out as being able to obtain any Government contract or contracts through improper influence.

"Contingent fee," as used in this clause, means any commission, percentage, brokerage, or other fee that is contingent upon the success that a person or concern has in securing a Government contract.

"Improper influence," as used in this clause, means any influence that induces or tends to induce a Government employee or officer to give consideration or to act regarding a Government contract on any basis other than the merits of the matter.

6. *FAR 52.203-7 ANTI-KICKBACK PROCEDURES (JUL 1995)

(a) Definitions.

"Kickback," as used in this clause, means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided, directly or indirectly, to any prime Contractor, prime Contractor employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a subcontract relating to a prime contract. "Person," as used in this clause, means a corporation, partnership, business association of any kind, trust, joint-stock company, or individual.

"Prime contract," as used in this clause, means a contract or contractual action entered into by the United States for the purpose of obtaining supplies, materials, equipment, or services of any kind.

"Prime Contractor," as used in this clause, means a person who has entered into a prime contract with the United States.

"Prime Contractor employee," as used in this clause, means any officer, partner, employee, or agent of a prime Contractor.

"Subcontract," as used in this clause, means a contract or contractual action entered into by a prime Contractor or subcontractor for the purpose of obtaining supplies, materials, equipment, or services of any kind under a prime contract.

"Subcontractor," as used in this clause, (1) means any person, other than the prime Contractor, who offers to furnish or furnishes any supplies, materials, equipment, or services of any kind under a prime contract or a

subcontract entered into in connection with such prime contract, and (2) includes any person who offers to furnish or furnishes general supplies to the prime Contractor or a higher tier subcontractor.

"Subcontractor employee," as used in this clause, means any officer, partner, employee, or agent of a subcontractor.

(b) The Anti-Kickback Act of 1986 (41 U.S.C. 51-58) (the Act), prohibits any person from--
(1) Providing or attempting to provide or offering to provide any kickback;
(2) Soliciting, accepting, or attempting to accept any kickback; or
(3) Including, directly or indirectly, the amount of any kickback in the contract price charged by a prime Contractor to the United States or in the contract price charged by a subcontractor to a prime Contractor or higher tier subcontractor.

(c) (1) The Contractor shall have in place and follow reasonable procedures designed to prevent and detect possible violations described in paragraph (b) of this clause in its own operations and direct business relationships.

(2) When the Contractor has reasonable grounds to believe that a violation described in paragraph (b) of this clause may have occurred, the Contractor shall promptly report in writing the possible violation. Such reports shall be made to the inspector general of the contracting agency, the head of the contracting agency if the agency does not have an inspector general, or the Department of Justice.

(3) The Contractor shall cooperate fully with any Federal agency investigating a possible violation described in paragraph (b) of this clause.

(4) The Contracting Officer may
(i) offset the amount of the kickback against any monies owed by the United States under the prime contract and/or
(ii) direct that the Prime Contractor withhold from sums owed a subcontractor under the prime contract the amount of the kickback. The Contracting Officer may order that monies withheld under subdivision (c)(4)(ii) of this clause be paid over to the Government unless the Government has already offset those monies under subdivision (c)(4)(i) of this clause. In either case, the Prime Contractor shall notify the Contracting Officer when the monies are withheld.

(5) The Contractor agrees to incorporate the substance of this clause, including subparagraph (c)(5) but excepting subparagraph (c)(1), in all subcontracts under this contract which exceed \$100,000.

7. *FAR 52.203-8 CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)

(a) If the Government receives information that a contractor or a person has engaged in conduct constituting a violation of subsection (a), (b), (c), or (d) of Section 27 of the Office of Federal Procurement Policy Act (41 U.S.C. 423) (the Act), as amended by section 4304 of the National Defense Authorization Act for Fiscal Year 1996 (Pub. L. 104-106), the Government may--

(1) Cancel the solicitation, if the contract has not yet been awarded or issued; or
(2) Rescind the contract with respect to which--
(i) The Contractor or someone acting for the Contractor has been convicted for an offense where the conduct constitutes a violation of subsection 27 (a) or (b) of the Act for the purpose of either--
(A) Exchanging the information covered by such subsections for anything of value; or
(B) Obtaining or giving anyone a competitive advantage in the award of a Federal agency procurement contract; or
(ii) The head of the contracting activity has determined, based upon a preponderance of the evidence, that the Contractor or someone acting for the Contractor has engaged in conduct constituting an offense punishable under subsection 27(e)(1) of the Act.

(b) If the Government rescinds the contract under paragraph (a) of this clause, the Government is entitled to recover, in addition to any penalty prescribed by law, the amount expended under the contract.

(c) The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law, regulation, or under this contract.

8. DFARS 252.203-7001 PROHIBITION ON PERSONS CONVICTED OF FRAUD OR OTHER DEFENSE—CONTRACT-RELATED FELONIES (MARCH 1999)

- (a) Definitions.
As used in this clause--
- (1) "Arising out of a contract with the "DoD" means any any act in connection with--
 - (i) Attempting to obtain;
 - (ii) Obtaining; or
 - (iii) Performing a contract or first-tier subcontract of any 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 judgement 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 any DoD contract or first-tier subcontract;
 - (2) On board of directors of any DoD Contractor or first-tier subcontractor;
 - (3) As a consultant to any DoD Contractor or first-tier subcontractor; or
 - (4) In any other capacity with the authority to influence, advise, or control the decisions of any DoD contractor or subcontractor with regard to any DoD contract or first-tier subcontract.
- (c) Unless waived, the prohibition in paragraph (b) of this clause applies for not less than five years from the date of conviction.
- (d) 10 U.S.C. 2408 provides that a defense Contractor or first-tier subcontractor shall be subject to a criminal penalty of not more than \$500,000 if convicted of knowingly--
- (1) Employing a person under a prohibition in paragraph (b) of this clause;
 - (2) Allowing such a person to serve on the board of directors of Contractor or first-tier subcontractor.
- (e) In addition to the criminal penalties contained in 10 U.S.C. 2408, 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) 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 items or components.
- (h) Pursuant to 10 U.S.C.2408(c), defense contractors and subcontractors may obtain information as to whether a particular has been convicted of fraud or any other felony arising out of a contract with the DoD by contracting The Office of Justice Programs, The Denial of Federal Benefits Office, U.S. Department of Justice, telephone (202) 616-3507.

9. DFARS 252.203-7002 DISPLAY OF DOD HOTLINE POSTER (DEC 1991) (For Military Contracts Exceeding \$5,000,000)

- (a) The Contractor shall display prominently in common work areas within business segments performing work under Department of Defense (DoD) contracts, DoD Hotline Posters prepared by DoD Office of the Inspector General.

(b) DoD Hotline Posters may be obtained from the DoD Inspector General, ATTN: Defense Hotline, 400 Army Navy Drive, Washington DC 22202-2884.

(c) The Contract need not comply with paragraph (a) of this clause if it has established a mechanism, such as a hotline, by which employees may report suspected instances of improper conduct, and instructions that encourage employees to make such reports.

10. *FAR 52.203-10 PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)

(a) The Government, at its election, may reduce the price of a fixed-price type contract and the total cost and fee under a cost-type contract of profit or fee determined as set forth in paragraph (b) of this clause if the head of the contracting activity or designee determines that there was a violation of subsection 27(a), (b), or (c) of the Office of Federal Procurement Policy Act, as amended (41 U.S.C. 423), as implemented in section 3.104 of the Federal Acquisition Regulation.

(b) The price or fee reduction referred to in paragraph (a) of this clause shall be--

(1) For cost-plus-fixed-fee contracts, the amount of the fee specified in the contract at the time of award;

(2) For cost-plus-incentive-fee contracts, the target fee specified in the contract at the time of award, notwithstanding any minimum fee or "fee floor" specified in the contract;

(3) For cost-plus-award-fee contracts--

(i) The base fee established in the contract at the time of contract award;

(ii) If no base fee is specified in the contract, 30 percent of the amount of each award fee otherwise payable to the Contractor for each award fee evaluation period or at each award fee determination point.

(4) For fixed-price-incentive contracts, the Government may--

(i) Reduce the contract target price and contract target profit both by an amount equal to the initial target profit specified in the contract at the time of contract award; or

(ii) If an immediate adjustment to the contract target price and contract target profit would have a significant adverse impact on the incentive price revision relationship under the contract, or adversely affect the contract financing provisions, the Contracting Officer may defer such adjustment until establishment of the total final price of the contract. The total final price established in accordance with the incentive price revision provisions of the contract shall be reduced by an amount equal to the initial target profit specified in the contract at the time of contract award and such reduced price shall be the total final contract price.

(5) For firm-fixed-price contracts, by 10 percent of the initial contract price or a profit amount determined by the Contracting Officer from records or documents in existence prior to the date of the contract award.

(c) The Government may, at its election, reduce a prime contractor's price or fee in accordance with the procedures of paragraph (b) of this clause for violations of the Act by its subcontractors by an amount not to exceed the amount of profit or fee reflected in the subcontract at the time the subcontract was first definitively priced.

(d) In addition to the remedies in paragraphs (a) and (c) of this clause, the Government may terminate this contract for default. The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law or under this contract.

11. *FAR 52.203-12 LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (JUNE 2003)

(a) Definitions.

"Agency," as used in this clause, means executive agency as defined in 2.101.

"Covered Federal Action," as used in this clause, means any of the following Federal actions:

(1) The awarding of any Federal contract.

(2) The making of any Federal grant.

(3) The making of any Federal loan.

(4) The entering into of any cooperative agreement.

(5) The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

"Indian tribe" and "tribal organization," as used in this clause, have the meaning provided in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B) and include Alaskan Natives.

"Influencing or attempting to influence," as used in this clause, means making, with the intent to influence, any communication to or appearance before an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any covered Federal action.

"Local government," as used in this clause, means a unit of government in a State and, if chartered, established, or otherwise recognized by a State for the performance of a governmental duty, including a local public authority, a special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

"Officer or employee of an agency," as used in this clause, includes the following individuals who are employed by an agency:

(1) An individual who is appointed to a position in the Government under title 5, United States Code, including a position under a temporary appointment.

(2) A member of the uniformed services, as defined in subsection 101(3), title 37, United States Code.

(3) A special Government employee, as defined in section 202, title 18, United States Code.

(4) An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, title 5, United States Code, appendix 2.

"Person," as used in this clause, means an individual, corporation, company, association, authority, firm, partnership, society, State and local government, regardless of whether such entity is operated for profit, or not for profit. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Reasonable compensation," as used in this clause, means, with respect to a regularly employed officer or employee of any person, compensation that is consistent with the normal compensation for such officer or employee for work that is not furnished to, not funded by, or not furnished in cooperation with the Federal Government.

"Reasonable payment," as used in this clause, means, with respect to professional and other technical services, a payment in an amount that is consistent with the amount normally paid for such services in the private sector.

"Recipient," as used in this clause, includes the Contractor and all subcontractors. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Regularly employed," as used in this clause, means, with respect to an officer or employee of a person requesting or receiving a Federal contract, an officer or employee who is employed by such person for at least 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract. An officer or employee who is employed by such person for less than 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

"State," as used in this clause, means a State of the United States, the District of Columbia, or an outlying area of the United States, an agency or instrumentality of a State, and multi-State, regional, or interstate entity having governmental duties and powers.

(b) Prohibitions.

(1) Section 1352 of title 31, United States Code, among other things, prohibits a recipient of a Federal Contract, grant, loan, or cooperative agreement from using appropriated funds to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: The awarding of any Federal contract; the making of any Federal grant; the making of any Federal loan; the entering into of any cooperative agreement; or the modification of any Federal contract, grant, loan, or cooperative agreement.

(2) The Act also requires Contractors to furnish a disclosure if any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a Federal contract, grant, loan, or cooperative agreement.

(3) The prohibitions of the Act do not apply under the following conditions:

(i) Agency and legislative liaison by own employees.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action if the payment is for agency and legislative liaison activities not directly related to a covered Federal action.

(B) For purposes of subdivision (b)(3)(i)(A) of this clause, providing any information specifically requested by an agency or Congress is permitted at any time.

(C) The following agency and legislative liaison activities are permitted at any time where they are not related to a specific solicitation for any covered Federal action:

(1) Discussing with an agency the qualities and characteristics (including individual demonstrations) of the person's products or services, conditions or terms of sale, and service capabilities.

(2) Technical discussions and other activities regarding the application or adaptation of the person's products or services for an agency's use.

(D) The following agency and legislative liaison activities are permitted where they are prior to formal solicitation of any covered Federal action--

(1) Providing any information not specifically requested but necessary for an agency to make an informed decision about initiation of a covered Federal action;

(2) Technical discussions regarding the preparation of an unsolicited proposal prior to its official submission; and

(3) Capability presentations by persons seeking awards from an agency pursuant to the provisions of the Small Business Act, as amended by Pub. L. 95-507, and subsequent amendments.

(E) Only those services expressly authorized by subdivision (b)(3)(i)(A) of this clause are permitted under this clause.

(ii) Professional and technical services.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of--

(1) A payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action, if payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action.

(2) Any reasonable payment to a person, other than an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action if the payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action. Persons other than officers or employees of a person requesting or receiving a covered Federal action include consultants and trade associations.

(B) For purposes of subdivision (b)(3)(ii)(A) of this clause, "professional and technical services" shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or

negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

(C) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation and any other requirements in the actual award documents.

(D) Only those services expressly authorized by subdivisions (b)(3)(ii)(A)(1) and (2) of this clause are permitted under this clause.

(E) The reporting requirements of FAR 3.803(a) shall not apply with respect to payments of reasonable compensation made to regularly employed officers or employees of a person.

(iii) Disclosure.

(A) The Contractor who requests or receives from an agency a Federal contract shall file with that agency a disclosure form, OMB standard form LLL, Disclosure of Lobbying Activities, if such person has made or has agreed to make any payment using nonappropriated funds (to include profits from any covered Federal action), which would be prohibited under subparagraph (b)(1) of this clause, if paid for with appropriated funds.

(B) The Contractor shall file a disclosure form at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under subparagraph (c)(1) of this clause. An event that materially affects the accuracy of the information reported includes--

(1) A cumulative increase of \$25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or

(2) A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or

(3) A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.

(C) The Contractor shall require the submittal of a certification, and if required, a disclosure form by any person who requests or receives any subcontract exceeding \$100,000 under the Federal contract.

(D) All subcontractor disclosure forms (but not certifications) shall be forwarded from tier to tier until received by the prime Contractor. The prime Contractor shall submit all disclosures to the Contracting Officer at the end of the calendar quarter in which the disclosure form is submitted by the subcontractor. Each subcontractor certification shall be retained in the subcontract file of the awarding Contractor.

(iv) Agreement. The Contractor agrees not to make any payment prohibited by this clause.

(v) Penalties.

(A) Any person who makes an expenditure prohibited under paragraph (a) of this clause or who fails to file or amend the disclosure form to be filed or amended by paragraph (b) of this clause shall be subject to civil penalties as provided for by 31 U.S.C. 1352. An imposition of a civil penalty does not prevent the Government from seeking any other remedy that may be applicable.

(B) Contractors may rely without liability on the representation made by their subcontractors in the certification and disclosure form.

(vi) Cost allowability. Nothing in this clause makes allowable or reasonable any costs which would otherwise be unallowable or unreasonable. Conversely, costs made specifically unallowable by the requirements in this clause will not be made allowable under any other provision.

12. *FAR 52.204-4 PRINTED OR COPIED DOUBLE-SIDED ON RECYCLED PAPER (AUG 2000)

(a) Definitions. As used in this clause—

“Postconsumer material” means a material or finished product that has served its intended use and has been discarded for disposal or recovery, having completed its life as a consumer item. Postconsumer material is a part of the broader category of “recovered material.” For paper and paper products, postconsumer material means “postconsumer fiber” defined by the U.S. Environmental Protection Agency (EPA) as—

(1) Paper, paperboard, and fibrous materials from retail stores, office buildings, homes, and so forth, after they have passed through their end-usage as a consumer item, including: used corrugated boxes; old newspapers; old magazines; mixed waste paper; tabulating cards; and used cordage; or

(2) All paper, paperboard, and fibrous materials that enter and are collected from municipal solid waste; but not

(3) Fiber derived from printers' over-runs, converters' scrap, and over-issue publications.

“Printed or copied double-sided” means printing or reproducing a document so that information is on both sides of a sheet of paper.

“Recovered material,” for paper and paper products, is defined by EPA in its Comprehensive Procurement Guideline as “recovered fiber” and means the following materials:

(1) Postconsumer fiber; and

(2) Manufacturing wastes such as—

(i) Dry paper and paperboard waste generated after completion of the papermaking process (that is, those manufacturing operations up to and including the cutting and trimming of the paper machine reel into smaller rolls or rough sheets) including: envelope cuttings, bindery trimmings, and other paper and paperboard waste resulting from printing, cutting, forming, and other converting operations; bag, box, and carton manufacturing wastes; and butt rolls, mill wrappers, and rejected unused stock; and

(ii) Repulped finished paper and paperboard from obsolete inventories of paper and paperboard manufacturers, merchants, wholesalers, dealers, printers, converters, or others.

(b) In accordance with Section 101 of Executive Order 13101 of September 14, 1998, Greening the Government through Waste Prevention, Recycling, and Federal Acquisition, the Contractor is encouraged to submit paper documents, such as offers, letters, or reports, that are printed or copied double-sided on recycled paper that meet minimum content standards specified in Section 505 of Executive Order 13101, when not using electronic commerce methods to submit information or data to the Government.

(c) If the Contractor cannot purchase high-speed copier paper, offset paper, forms bond, computer printout paper, carbonless paper, file folders, white wove envelopes, writing and office paper, book paper, cotton fiber paper, and cover stock meeting the 30 percent postconsumer material standard for use in submitting paper documents to the Government, it should use paper containing no less than 20 percent postconsumer material. This lesser standard should be used only when paper meeting the 30 percent postconsumer material standard is not obtainable at a reasonable price or does not meet reasonable performance standards.

(End of clause)

13. *FAR 52.204-7 CENTRAL CONTRACTOR REGISTRATION (OCT 2003)

(a) Definitions. As used in this clause—

“Central Contractor Registration (CCR) database” means the primary Government repository for Contractor information required for the conduct of business with the Government.

“Data Universal Numbering System (DUNS) number” means the 9-digit number assigned by Dun and Bradstreet, Inc. (D&B) to identify unique business entities.

“Data Universal Numbering System +4 (DUNS+4) number” means the DUNS number assigned by D&B plus a 4-character suffix that may be assigned by a business concern. (D&B has no affiliation with this 4-character suffix.) This 4-character suffix may be assigned at the discretion of the business concern to establish additional CCR records for identifying alternative Electronic Funds Transfer (EFT) accounts (see the FAR at Subpart 32.11) for the same parent concern.

“Registered in the CCR database” means that—

(1) The Contractor has entered all mandatory information, including the DUNS number or the DUNS+4 number, into the CCR database; and

(2) The Government has validated all mandatory data fields and has marked the record “Active”.

(b)(1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee shall be registered in the CCR database prior to award, during performance, and through final payment of any contract, basic agreement, basic ordering agreement, or blanket purchasing agreement resulting from this solicitation.

(2) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation “DUNS” or “DUNS +4” followed by the DUNS or DUNS +4 number that identifies the offeror’s name and address exactly as stated in the offer. The DUNS number will be used by the Contracting Officer to verify that the offeror is registered in the CCR database.

(c) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one.

(1) An offeror may obtain a DUNS number—

(i) If located within the United States, by calling Dun and Bradstreet at 1-866-705-5711 or via the Internet at <http://www.dnb.com>; or

(ii) If located outside the United States, by contacting the local Dun and Bradstreet office.

(2) The offeror should be prepared to provide the following information:

(i) Company legal business.

(ii) Tradestyle, doing business, or other name by which your entity is commonly recognized.

(iii) Company Physical Street Address, City, State, and Zip Code.

(iv) Company Mailing Address, City, State and Zip Code (if separate from physical).

(v) Company Telephone Number.

(vi) Date the company was started.

(vii) Number of employees at your location.

(viii) Chief executive officer/key manager.

(ix) Line of business (industry).

(x) Company Headquarters name and address (reporting relationship within your entity).

(d) If the Offeror does not become registered in the CCR database in the time prescribed by the Contracting Officer, the Contracting Officer will proceed to award to the next otherwise successful registered Offeror.

(e) Processing time, which normally takes 48 hours, should be taken into consideration when registering. Offerors who are not registered should consider applying for registration immediately upon receipt of this solicitation.

(f) The Contractor is responsible for the accuracy and completeness of the data within the CCR database, and for any liability resulting from the Government’s reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to review and update on an annual basis from the date of initial registration or subsequent updates its information in the CCR database to ensure it is current, accurate and complete. Updating information in the CCR does not alter the terms and conditions of this contract and is not a substitute for a properly executed contractual document.

(g) (1) (i) If a Contractor has legally changed its business name, “doing business as” name, or division name (whichever is shown on the contract), or has transferred the assets used in performing the contract, but has not completed the necessary requirements regarding novation and change-of name agreements in Subpart 42.12, the Contractor shall provide the responsible Contracting Officer a minimum of one business day’s written notification of

its intention to (A) change the name in the CCR database; (B) comply with the requirements of Subpart 42.12 of the FAR; and (C) agree in writing to the timeline and procedures specified by the responsible Contracting Officer. The Contractor must provide with the notification sufficient documentation to support the legally changed name.

(ii) If the Contractor fails to comply with the requirements of paragraph (g)(1)(i) of this clause, or fails to perform the agreement at paragraph (g)(1)(i)(C) of this clause, and, in the absence of a properly executed novation or change-of name agreement, the CCR information that shows the Contractor to be other than the Contractor indicated in the contract will be considered to be incorrect information within the meaning of the "Suspension of Payment" paragraph of the electronic funds transfer (EFT) clause of this contract.

(2) The Contractor shall not change the name or address for EFT payments or manual payments, as appropriate, in the CCR record to reflect an assignee for the purpose of assignment of claims (see FAR Subpart 32.8, Assignment of Claims). Assignees shall be separately registered in the CCR database. Information provided to the Contractor's CCR record that indicates payments, including those made by EFT, to an ultimate recipient other than that Contractor will be considered to be incorrect information within the meaning of the "Suspension of payment" paragraph of the EFT clause of this contract.

(h) Offerors and Contractors may obtain information on registration and annual confirmation requirements via the internet at <http://www.ccr.gov> or by calling 1-888-227-2423, or 269-961-5757.
(End of clause)

14. DFARS 252.204-7003 CONTROL OF GOVERNMENT PERSONNEL WORK PRODUCT (APR 1992)

The Contractor's procedures for protecting against unauthorized disclosure of information shall not require Department of Defense employees or members of the Armed Forces to relinquish control of their work products, whether classified or not, to the Contractor.

15. DFARS 252.204-7004 ALTERNATE A (NOV 2003)

As prescribed in 204.1104, substitute the following paragraph (a) for paragraph (a) of the clause at FAR 52.204-7:

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

"Central Contractor Registration (CCR) database" means the primary Government repository for contractor information required for the conduct of business with the Government.

"Commercial and Government Entity (CAGE) code" means-

(1) A code assigned by the Defense Logistics Information Service (DLIS) to identify a commercial or Government entity; or

(2) A code assigned by a member of the North Atlantic Treaty Organization that DLIS records and maintains in the CAGE master file. This type of code is known as an "NCAGE code."

"Data Universal Numbering System (DUNS) number" means the 9-digit number assigned by Dun and Bradstreet, Inc. (D&B) to identify unique business entities.

"Data Universal Numbering System +4 (DUNS+4) number" means the DUNS number assigned by D&B plus a 4-character suffix that may be assigned by a business concern. (D&B has no affiliation with this 4-character suffix.) This 4-character suffix may be assigned at the discretion of the business concern to establish additional CCR records for identifying alternative Electronic Funds Transfer (EFT) accounts (see Subpart 32.11 of the Federal Acquisition Regulation) for the same parent concern.

"Registered in the CCR database" means that-

(1) The Contractor has entered all mandatory information, including the DUNS number or the

DUNS+4 number, into the CCR database;

(2) The Contractor's CAGE code is in the CCR database; and

(3) The Government has validated all mandatory data fields and has marked the records

"Active."

16. *FAR 52.209-6 PROTECTING THE GOVERNMENTS INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (JUL 1995)

(a) The Government suspends or debar Contractors to protect the Government's interests. The Contractor shall not enter into any subcontract in excess of \$25,000 with a Contractor that is debarred, suspended, or proposed for debarment unless there is a compelling reason to do so.

(b) The Contractor shall require each proposed first-tier subcontractor, whose subcontract will exceed \$25,000, to disclose to the Contractor, in writing, whether as of the time of award of the subcontract, the subcontractor, or its principals, is or is not debarred, suspended, or proposed for debarment by the Federal Government.

(c) A corporate officer or a designee of the Contractor shall notify the Contracting Officer, in writing, before entering into a subcontract with a party that is debarred, suspended, or proposed for debarment (see FAR 9.404 for information on the List of Parties Excluded from Procurement Programs). The notice must include the following:

(1) The name of the subcontractor.

(2) The Contractor's knowledge of the reasons for the subcontractor being on the List of Parties Excluded from Procurement Programs.

(3) The compelling reason(s) for doing business with the subcontractor notwithstanding its inclusion on the List of Parties Excluded From Procurement Programs.

(4) The systems and procedures the Contractor has established to ensure that it is fully protecting the Government's interests when dealing with such subcontractor in view of the specific basis for the party's debarment, suspension, or proposed debarment.

17. DFARS 252.209-7004 SUBCONTRACTING WITH FIRMS THAT ARE OWNED OR CONTROLLED BY THE GOVERNMENT OF A TERRORIST COUNTRY (MAR 1998)

(a) Unless the Government determines that there is a compelling reason to do so, the Contractor shall not enter into any subcontract in excess of \$25,000 with a firm, or a subsidiary of a firm, that is identified, on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs, as being ineligible for the award of Defense contracts or subcontracts because it is owned or controlled by the government of a terrorist country.

(b) A corporate officer or a designee of the Contractor shall notify the Contracting Officer, in writing, before entering into a subcontract with a party that is identified, on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs, as being ineligible for the award of Defense contracts or subcontracts because it is owned or controlled by the government of a terrorist country. The notice must include the name of the proposed subcontractor and the compelling reason(s) for doing business with the subcontractor notwithstanding its inclusion on the List of Parties Excluded From Federal Procurement and Nonprocurement Programs.

(End of clause)

18. *FAR 52.211-15 DEFENSE PRIORITY AND ALLOCATION REQUIREMENTS (SEP 1990) [For Military Contract's Only]

This is a rated order certified for national defense use, and the Contractor shall follow all the requirements of the Defense Priorities and Allocations System regulation (15 CFR 700).

19. FAR 52.211-18 VARIATION IN ESTIMATED QUANTITY (APR 1984)

If the quantity of a unit-priced item in this contract is an estimated quantity and the actual quantity of the unit-priced item varies more than 15 percent above or below the estimated quantity, an equitable adjustment in the contract price shall be made upon demand of either party. The equitable adjustment shall be based upon any increase or decrease in costs due solely to the variation above 115 percent or below 85 percent of the estimated quantity. If the quantity variation is such as to cause an increase in the time necessary for completion, the Contractor may request, in writing, an extension of time, to be received by the Contracting Officer within 10 days from the beginning of the delay, or within such further period as may be granted by the Contracting Officer before the date of final settlement of the contract. Upon the receipt of a written request for an extension, the Contracting Officer shall ascertain the facts and make an adjustment for extending the completion date as, in the judgement of the Contracting Officer, is justified.

20. *FAR 52.214-26 AUDIT AND RECORDS--SEALED BIDDING (OCT 1997)

(a) As used in this clause, "records" includes books, documents, accounting procedures and practices, and other data, regardless of whether such items are in written form, in the form of computer data, or in any other form.

(b) Cost or pricing data. If the Contractor has submitted cost or pricing data in connection with the pricing of any modification to this contract, the Contracting Officer or authorized representative of the Contracting Officer, in order to evaluate the accuracy, completeness, and currency of the cost or pricing data, shall have the right to examine and audit all of the Contractor's records, including computations and projections related to--

- (1) The proposal for the modification;
- (2) The discussions conducted on the proposal(s), including those related to negotiating;
- (3) Pricing of the modification; or
- (4) Performance of the modification.

(c) Comptroller General. In the case of pricing any modification, the Comptroller General of the United States, or an authorized representative, shall have the same rights as specified in paragraph (b) of this clause.

(d) Availability. The Contractor shall make available at its office at all reasonable times the materials described in paragraph (b) of this clause, for examination, audit, or reproduction, until 3 years after final payment under this contract, or for any other period specified in Subpart 4.7 of the Federal Acquisition Regulation (FAR). FAR Subpart 4.7, Contractor Records Retention, in effect on the date of this contract, is incorporated by reference in its entirety and made a part of this contract.

(1) If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement.

(2) Records pertaining to appeals under the Disputes clause or to litigation or the settlement of claims arising under or relating to the performance of this contract shall be made available until disposition of such appeals, litigation, or claims.

(e) The Contractor shall insert a clause containing all the provisions of this clause, including this paragraph (e), in all subcontracts expected to exceed the threshold in FAR 15.403-4(a)(1) for submission of cost or pricing data.

21. *FAR 52.214-27 PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA—MODIFICATIONS--SEALED BIDDING (OCT 1997)

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

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

- (1) The Contractor or a subcontractor furnished cost or pricing data that were not complete, accurate, and current as certified in its Certificate of Current Cost or Pricing Data,
- (2) a subcontractor or prospective subcontractor furnished the Contractor cost or pricing data that were not complete, accurate, and current as certified in the Contractor's Certificate of Current Cost or Pricing Data, or
- (3) Any of these parties furnished data of any description that were not accurate, the price shall be reduced accordingly and the contract shall be modified to reflect the reduction. This right to a price reduction is limited to that resulting from defects in data relating to modifications for which this clause becomes operative under paragraph (a) of this clause.
- (c) Any reduction in the contract price under paragraph (b) above due to defective data from a prospective subcontractor that was not subsequently awarded the subcontract shall be limited to the amount, plus applicable overhead and profit markup, by which
- (1) the actual subcontract or
- (2) the actual cost to the Contractor, if there was no subcontract, was less than the prospective subcontract cost estimate submitted by the Contractor; provided, that the actual subcontract price was not itself affected by defective cost or pricing data.
- (d) (1) If the Contracting Officer determines under paragraph (b) of this clause that a price or cost reduction should be made, the Contractor agrees not to raise the following matters as a defense:
- (i) The Contractor or subcontractor was a sole source supplier or otherwise was in a superior bargaining position and thus the price of the contract would not have been modified even if accurate, complete, and current cost or pricing data had been submitted.
- (ii) The Contracting Officer should have known that the cost or pricing data in issue were defective even though the Contractor or subcontractor took no affirmative action to bring the character of the data to the attention of the Contracting Officer.
- (iii) The contract was based on an agreement about the total cost of the contract and there was no agreement about the cost of each item procured under the contract.
- (iv) The Contractor or subcontractor did not submit a Certificate of Current Cost or Pricing Data.
- (2) (i) Except as prohibited by subdivision (d)(2)(ii) of this clause, an offset in an amount determined appropriate by the Contracting Officer based upon the facts shall be allowed against the amount of a contract price reduction if--
- (A) The Contractor certifies to the Contracting Officer that, to the best of the Contractor's knowledge and belief, the Contractor is entitled to the offset in the amount requested; and
- (B) The Contractor proves that the cost or pricing data were available before the date of agreement on the price of the contract (or price of the modification) and that the data were not submitted before such date.
- (ii) An offset shall not be allowed if--
- (A) The understated data was known by the Contractor to be understated when the Certificate of Current Cost or Pricing Data was signed; or
- (B) The Government proves that the facts demonstrate that the contract price would not have increased in the amount to be offset even if the available data had been submitted before the date of agreement on price.
- (e) If any reduction in the contract price under this clause reduces the price of items for which payment was made prior to the date of the modification reflecting the price reduction, the Contractor shall be liable to and shall pay the United States at the time such overpayment is repaid--
- (1) Simple interest on the amount of such overpayment to be computed from the date(s) of overpayment to the Contractor to the date the Government is repaid by the Contractor at the applicable underpayment rate effective for each quarter prescribed by the Secretary of the Treasury under 26 U.S.C. 6621(a)(2); and
- (2) A penalty equal to the amount of the overpayment, if the Contractor or subcontractor knowingly submitted cost or pricing data which were incomplete, inaccurate, or noncurrent.

22. *FAR 52.214-28 SUBCONTRACTOR COST OR PRICING DATA--MODIFICATIONS—SEALED BIDDING (OCT 1997)

(a) The requirements of paragraphs (b) and (c) of this clause shall--

(1) Become operative only for any modification to this contract involving aggregate increases and/or decreases in costs, plus applicable profits, expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4(a)(1); and

(2) Be limited to such modifications.

(b) Before awarding any subcontract expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4(a)(1), on the date of agreement on price or the date of award, whichever is later; or before pricing any subcontract modification involving aggregate increases and/or decreases in costs, plus applicable profits, expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4(a)(1), the Contractor shall require the subcontractor to submit cost or pricing data (actually or by specific identification in writing), unless an exception under FAR 15.403-1(b) applies.

(c) The Contractor shall require the subcontractor to certify in substantially the form prescribed in FAR subsection 15.406-2 that, to the best of its knowledge and belief, the data submitted under paragraph (b) above were accurate, complete, and current as of the date of agreement on the negotiated price of the subcontract or subcontract modification.

(d) The Contractor shall insert the substance of this clause, including this paragraph (d), in each subcontract that when entered into, exceeds the threshold for submission of cost or pricing data at FAR 15.403-4(a)(1).

(End of clause)

23. *FAR 52.219-4 NOTICE OF PRICE EVALUATION PREFERENCE FOR HUBZONE SMALL BUSINESS CONCERNS (JAN 1999)

(a) *Definition.* "HUBZone small business concern," as used in this clause, means a small business concern that appears on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration.

(b) *Evaluation preference.* (1) Offers will be evaluated by adding a factor of 10 percent to the price of all offers, except—

(i) Offers from HUBZone small business concerns that have not waived the evaluation preference;

(ii) Otherwise successful offers from small business concerns;

(iii) Otherwise successful offers of eligible products under the Trade Agreements Act when the dollar threshold for application of the Act is exceeded (see 25.402 of the Federal Acquisition Regulation (FAR)); and

(iv) Otherwise successful offers where application of the factor would be inconsistent with a Memorandum of Understanding or other international agreement with a foreign government.

(2) The factor of 10 percent shall be applied on a line item basis or to any group of items on which award may be made. Other evaluation factors described in the solicitation shall be applied before application of the factor.

(3) A concern that is both a HUBZone small business concern and a small disadvantaged business concern will receive the benefit of both the HUBZone small business price evaluation preference and the small disadvantaged business price evaluation adjustment (see FAR clause 52.219-23). Each applicable price evaluation preference or adjustment shall be calculated independently against an offeror's base offer. These individual preference amounts shall be added together to arrive at the total evaluated price for that offer.

(c) *Waiver of evaluation preference.* A HUBZone small business concern may elect to waive the evaluation preference, in which case the factor will be added to its offer for evaluation purposes. The agreements in paragraph

(d) of this clause do not apply if the offeror has waived the evaluation preference.

[] Offeror elects to waive the evaluation preference.

(d) *Agreement.* A HUBZone small business concern agrees that in the performance of the contract, in the case of a contract for—

(1) Services (except construction), at least 50 percent of the cost of personnel for contract performance will be spent for employees of the concern or employees of other HUBZone small business concerns;

(2) Supplies (other than procurement from a nonmanufacturer of such supplies), at least 50 percent of the cost of manufacturing, excluding the cost of materials, will be performed by the concern or other HUBZone small business concerns;

(3) General construction, at least 15 percent of the cost of the contract performance incurred for personnel will be spent on the concern's employees or the employees of other HUBZone small business concerns; or

(4) Construction by special trade contractors, at least 25 percent of the cost of the contract performance incurred for personnel will be spent on the concern's employees or the employees of other HUBZone small business concerns.

(e) A HUBZone joint venture agrees that in the performance of the contract, the applicable percentage specified in paragraph (d) of this clause will be performed by the HUBZone small business participant or participants.

(f) A HUBZone small business concern nonmanufacturer agrees to furnish in performing this contract only end items manufactured or produced by HUBZone small business manufacturer concerns. This paragraph does not apply in connection with construction or service contracts.

(End of clause)

24. *FAR 52.219-8 UTILIZATION OF SMALL BUSINESS CONCERNS (MAY 2004)

(a) It is the policy of the United States that small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns shall have the maximum practicable opportunity to participate in performing contracts let by any Federal agency, including contracts and subcontracts for subsystems, assemblies, components, and related services for major systems. It is further the policy of the United States that its prime contractors establish procedures to ensure the timely payment of amounts due pursuant to the terms of their subcontracts with small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns.

(b) The Contractor hereby agrees to carry out this policy in the awarding of subcontracts to the fullest extent consistent with efficient contract performance. The Contractor further agrees to cooperate in any studies or surveys as may be conducted by the United States Small Business Administration or the awarding agency of the United States as may be necessary to determine the extent of the Contractor's compliance with this clause.

(c) *Definitions.* As used in this contract—

“HUBZone small business concern” means a small business concern that appears on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration .

“Service-disabled veteran-owned small business concern ” —

(1) Means a small business concern—

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a service-disabled veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

“Small business concern” means a small business as defined pursuant to Section 3 of the Small Business Act and relevant regulations promulgated pursuant thereto.

“Small disadvantaged business concern” means a small business concern that represents, as part of its offer that—

(1) It has received certification as a small disadvantaged business concern consistent with 13 CFR part 124, Subpart B;

(2) No material change in disadvantaged ownership and control has occurred since its certification;

(3) Where the concern is owned by one or more individuals, the net worth of each individual upon whom the certification is based does not exceed \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); and

(4) It is identified, on the date of its representation, as a certified small disadvantaged business in the database maintained by the Small Business Administration (PRO-Net).

“Veteran-owned small business concern” means a small business concern—

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

“Women-owned small business concern” means a small business concern—

(1) That is at least 51 percent owned by one or more women, or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

(d) Contractors acting in good faith may rely on written representations by their subcontractors regarding their status as a small business concern, a veteran-owned small business concern, a service-disabled veteran-owned small business concern, a HUBZone small business concern, a small disadvantaged business concern, or a women-owned small business concern.

(End of clause)

25. *FAR 52.219-9 SMALL BUSINESS SUBCONTRACTING PLAN (JAN 2002) [When Contracting By Negotiations]

(a) This clause does not apply to small business concerns.

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

“Commercial item” means a product or service that satisfies the definition of commercial item in section 2.101 of the Federal Acquisition Regulation.

“Commercial plan” means a subcontracting plan (including goals) that covers the offeror’s fiscal year and that applies to the entire production of commercial items sold by either the entire company or a portion thereof (*e.g.*, division, plant, or product line).

“Individual contract plan” means a subcontracting plan that covers the entire contract period (including option periods), applies to a specific contract, and has goals that are based on the offeror’s planned subcontracting in support of the specific contract, except that indirect costs incurred for common or joint purposes may be allocated on a prorated basis to the contract.

“Master plan” means a subcontracting plan that contains all the required elements of an individual contract plan, except goals, and may be incorporated into individual contract plans, provided the master plan has been approved.

“Subcontract” means any agreement (other than one involving an employer-employee relationship) entered into by a Federal Government prime Contractor or subcontractor calling for supplies or services required for performance of the contract or subcontract.

(c) The offeror, upon request by the Contracting Officer, shall submit and negotiate a subcontracting plan, where applicable, that separately addresses subcontracting with small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business concerns, small disadvantaged business, and women-owned small business concerns. If the offeror is submitting an individual contract plan, the plan must separately address subcontracting with small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business

concerns, with a separate part for the basic contract and separate parts for each option (if any). The plan shall be included in and made a part of the resultant contract. The subcontracting plan shall be negotiated within the time specified by the Contracting Officer. Failure to submit and negotiate the subcontracting plan shall make the offeror ineligible for award of a contract.

(d) The offeror's subcontracting plan shall include the following:

(1) Goals, expressed in terms of percentages of total planned subcontracting dollars, for the use of small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns as subcontractors. The offeror shall include all subcontracts that contribute to contract performance, and may include a proportionate share of products and services that are normally allocated as indirect costs.

(2) A statement of—

(i) Total dollars planned to be subcontracted for an individual contract plan; or the offeror's total projected sales, expressed in dollars, and the total value of projected subcontracts to support the sales for a commercial plan;

(ii) Total dollars planned to be subcontracted to small business concerns;

(iii) Total dollars planned to be subcontracted to veteran-owned small business concerns;

(iv) Total dollars planned to be subcontracted to service-disabled veteran-owned small business;

(v) Total dollars planned to be subcontracted to HUBZone small business concerns;

(vi) Total dollars planned to be subcontracted to small disadvantaged business concerns; and

(vii) Total dollars planned to be subcontracted to women-owned small business concerns.

(3) A description of the principal types of supplies and services to be subcontracted, and an identification of the types planned for subcontracting to—

(i) Small business concerns;

(ii) Veteran-owned small business concerns;

(iii) Service-disabled veteran-owned small business concerns;

(iv) HUBZone small business concerns;

(v) Small disadvantaged business concerns; and

(vi) Women-owned small business concerns.

(4) A description of the method used to develop the subcontracting goals in paragraph (d)(1) of this clause.

(5) A description of the method used to identify potential sources for solicitation purposes (*e.g.*, existing company source lists, the Procurement Marketing and Access Network (PRO-Net) of the Small Business Administration (SBA), veterans service organizations, the National Minority Purchasing Council Vendor Information Service, the Research and Information Division of the Minority Business Development Agency in the Department of Commerce, or small, HUBZone, small disadvantaged, and women-owned small business trade associations). A firm may rely on the information contained in PRO-Net as an accurate representation of a concern's size and ownership characteristics for the purposes of maintaining a small, veteran-owned small, service-disabled veteran-owned small, HUBZone small, small disadvantaged, and women-owned small business source list. Use of PRONet as its source list does not relieve a firm of its responsibilities (*e.g.*, outreach, assistance, counseling, or publicizing subcontracting opportunities) in this clause.

(6) A statement as to whether or not the offeror included indirect costs in establishing subcontracting goals, and a description of the method used to determine the proportionate share of indirect costs to be incurred with—

(i) Small business concerns;

(ii) Veteran-owned small business concerns;

(iii) Service-disabled veteran-owned small business concerns;

(iv) HUBZone small business concerns;

(v) Small disadvantaged business concerns; and

(vi) Women-owned small business concerns.

(7) The name of the individual employed by the offeror who will administer the offeror's subcontracting program, and a description of the duties of the individual.

(8) A description of the efforts the offeror will make to assure that small business, veteran-owned

small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns have an equitable opportunity to compete for subcontracts.

(9) Assurances that the offeror will include the clause of this contract entitled "Utilization of Small Business Concerns" in all subcontracts that offer further subcontracting opportunities, and that the offeror will require all subcontractors (except small business concerns) that receive subcontracts in excess of \$500,000 (\$1,000,000 for construction of any public facility) to adopt a subcontracting plan that complies with the requirements of this clause.

(10) Assurances that the offeror will—

(i) Cooperate in any studies or surveys as may be required;

(ii) Submit periodic reports so that the Government can determine the extent of compliance by the offeror with the subcontracting plan;

(iii) Submit Standard Form (SF) 294, Subcontracting Report for Individual Contracts, and/or SF 295, Summary Subcontract Report, in accordance with paragraph (j) of this clause. The reports shall provide information on subcontract awards to small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, women-owned small business concerns, and Historically Black Colleges and Universities and Minority Institutions. Reporting shall be in accordance with the instructions on the forms or as provided in agency regulations.

(iv) Ensure that its subcontractors agree to submit SF 294 and SF 295.

(11) A description of the types of records that will be maintained concerning procedures that have been adopted to comply with the requirements and goals in the plan, including establishing source lists; and a description of the offeror's efforts to locate small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns and award subcontracts to them. The records shall include at least the following (on a plant-wide or company-wide basis, unless otherwise indicated):

(i) Source lists (*e.g.*, PRO-Net), guides, and other data that identify small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns.

(ii) Organizations contacted in an attempt to locate sources that are small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, or women-owned small business concerns.

(iii) Records on each subcontract solicitation resulting in an award of more than \$100,000, indicating—

- (A) Whether small business concerns were solicited and, if not, why not;
- (B) Whether veteran-owned small business concerns were solicited and, if not, why not;
- (C) Whether service-disabled veteran-owned small business concerns were solicited and, if not, why not;
- (D) Whether HUBZone small business concerns were solicited and, if not, why not;
- (E) Whether small disadvantaged business concerns were solicited and, if not, why not;
- (F) Whether women-owned small business concerns were solicited and, if not, why not; and

(G) If applicable, the reason award was not made to a small business concern.

(iv) Records of any outreach efforts to contact—

- (A) Trade associations;
- (B) Business development organizations;
- (C) Conferences and trade fairs to locate small, HUBZone small, small disadvantaged, and women-owned small business sources; and
- (D) Veterans service organizations.

(v) Records of internal guidance and encouragement provided to buyers through—

- (A) Workshops, seminars, training, etc.; and
- (B) Monitoring performance to evaluate compliance with the program's

requirements.

(vi) On a contract-by-contract basis, records to support award data submitted by the offeror to the Government, including the name, address, and business size of each subcontractor. Contractors having commercial plans need not comply with this requirement.

(e) In order to effectively implement this plan to the extent consistent with efficient contract performance, the Contractor shall perform the following functions:

(1) Assist small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns by arranging solicitations, time for the preparation of bids, quantities, specifications, and delivery schedules so as to facilitate the participation by such concerns. Where the Contractor's lists of potential small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business subcontractors are excessively long, reasonable effort shall be made to give all such small business concerns an opportunity to compete over a period of time.

(2) Provide adequate and timely consideration of the potentialities of small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns in all "make-or-buy" decisions.

(3) Counsel and discuss subcontracting opportunities with representatives of small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business firms.

(4) Provide notice to subcontractors concerning penalties and remedies for misrepresentations of business status as small, veteran-owned small business, HUBZone small, small disadvantaged, or women-owned small business for the purpose of obtaining a subcontract that is to be included as part or all of a goal contained in the Contractor's subcontracting plan.

(f) A master plan on a plant or division-wide basis that contains all the elements required by paragraph (d) of this clause, except goals, may be incorporated by reference as a part of the subcontracting plan required of the offeror by this clause; provided —

(1) The master plan has been approved;

(2) The offeror ensures that the master plan is updated as necessary and provides copies of the approved master plan, including evidence of its approval, to the Contracting Officer; and

(3) Goals and any deviations from the master plan deemed necessary by the Contracting Officer to satisfy the requirements of this contract are set forth in the individual subcontracting plan.

(g) A commercial plan is the preferred type of subcontracting plan for contractors furnishing commercial items. The commercial plan shall relate to the offeror's planned subcontracting generally, for both commercial and Government business, rather than solely to the Government contract. Commercial plans are also preferred for subcontractors that provide commercial items under a prime contract, whether or not the prime contractor is supplying a commercial item.

(h) Prior compliance of the offeror with other such subcontracting plans under previous contracts will be considered by the Contracting Officer in determining the responsibility of the offeror for award of the contract.

(i) The failure of the Contractor or subcontractor to comply in good faith with—

(1) The clause of this contract entitled "Utilization Of Small Business Concerns;" or

(2) An approved plan required by this clause, shall be a material breach of the contract.

(j) The Contractor shall submit the following reports:

(1) *Standard Form 294, Subcontracting Report for Individual Contracts*. This report shall be submitted to the Contracting Officer semiannually and at contract completion. The report covers subcontract award data related to this contract. This report is not required for commercial plans.

(2) *Standard Form 295, Summary Subcontract Report*. This report encompasses all of the contracts with the awarding agency. It must be submitted semi-annually for contracts with the Department of Defense and annually for contracts with civilian agencies. If the reporting activity is covered by a commercial plan, the reporting activity must report annually all subcontract awards under that plan. All reports submitted at the close of each fiscal year (both individual and commercial plans) shall include a breakout, in the Contractor's format, of subcontract awards, in whole dollars, to small disadvantaged business concerns by North American Industry Classification System (NAICS) Industry Subsector. For a commercial plan, the Contractor may obtain from each of its subcontractors a predominant NAICS Industry Subsector and report all awards to that subcontractor under its predominant NAICS Industry Subsector.

(End of clause)

26. *FAR 52.219-9 SMALL BUSINESS SUBCONTRACTING PLAN (JAN 2002) --ALTERNATE I (OCT 2001) [When Contracting By Sealed Bidding]

- (a) This clause does not apply to small business concerns.
- (b) *Definitions.* As used in this clause—

“Commercial item” means a product or service that satisfies the definition of commercial item in section 2.101 of the Federal Acquisition Regulation.

“Commercial plan” means a subcontracting plan (including goals) that covers the offeror’s fiscal year and that applies to the entire production of commercial items sold by either the entire company or a portion thereof (*e.g.*, division, plant, or product line).

“Individual contract plan” means a subcontracting plan that covers the entire contract period (including option periods), applies to a specific contract, and has goals that are based on the offeror’s planned subcontracting in support of the specific contract, except that indirect costs incurred for common or joint purposes may be allocated on a prorated basis to the contract.

“Master plan” means a subcontracting plan that contains all the required elements of an individual contract plan, except goals, and may be incorporated into individual contract plans, provided the master plan has been approved.

“Subcontract” means any agreement (other than one involving an employer-employee relationship) entered into by a Federal Government prime Contractor or subcontractor calling for supplies or services required for performance of the contract or subcontract.

(c) The apparent low bidder, upon request by the Contracting Officer, shall submit a subcontracting plan, where applicable, that separately addresses subcontracting with small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns. If the bidder is submitting an individual contract plan, the plan must separately address subcontracting with small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns, with a separate part for the basic contract and separate parts for each option (if any). The plan shall be included in and made a part of the resultant contract. The subcontracting plan shall be submitted within the time specified by the Contracting Officer. Failure to submit the subcontracting plan shall make the bidder ineligible for the award of a contract.

(d) The offeror's subcontracting plan shall include the following:

(1) Goals, expressed in terms of percentages of total planned subcontracting dollars, for the use of small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns as subcontractors. The offeror shall include all subcontracts that contribute to contract performance, and may include a proportionate share of products and services that are normally allocated as indirect costs.

(2) A statement of—

(i) Total dollars planned to be subcontracted for an individual contract plan; or the offeror’s total projected sales, expressed in dollars, and the total value of projected subcontracts to support the sales for a commercial plan;

(ii) Total dollars planned to be subcontracted to small business concerns;

(iii) Total dollars planned to be subcontracted to veteran-owned small business concerns;

(iv) Total dollars planned to be subcontracted to service-disabled veteran-owned small business;

(v) Total dollars planned to be subcontracted to HUBZone small business concerns;

(vi) Total dollars planned to be subcontracted to small disadvantaged business concerns;

and

(vii) Total dollars planned to be subcontracted to women-owned small business concerns.

(3) A description of the principal types of supplies and services to be subcontracted, and an identification of the types planned for subcontracting to—

(i) Small business concerns;

(ii) Veteran-owned small business concerns;

- (iii) Service-disabled veteran-owned small business concerns;
- (iv) HUBZone small business concerns;
- (v) Small disadvantaged business concerns; and
- (vi) Women-owned small business concerns.

(4) A description of the method used to develop the subcontracting goals in paragraph (d)(1) of this clause.

(5) A description of the method used to identify potential sources for solicitation purposes (*e.g.*, existing company source lists, the Procurement Marketing and Access Network (PRO-Net) of the Small Business Administration (SBA), veterans service organizations, the National Minority Purchasing Council Vendor Information Service, the Research and Information Division of the Minority Business Development Agency in the Department of Commerce, or small, HUBZone, small disadvantaged, and women-owned small business trade associations). A firm may rely on the information contained in PRO-Net as an accurate representation of a concern's size and ownership characteristics for the purposes of maintaining a small, veteran-owned small, service-disabled veteran-owned small, HUBZone small, small disadvantaged, and women-owned small business source list. Use of PRO-Net as its source list does not relieve a firm of its responsibilities (*e.g.*, outreach, assistance, counseling, or publicizing subcontracting opportunities) in this clause.

(6) A statement as to whether or not the offeror included indirect costs in establishing subcontracting goals, and a description of the method used to determine the proportionate share of indirect costs to be incurred with—

- (i) Small business concerns;
- (ii) Veteran-owned small business concerns;
- (iii) Service-disabled veteran-owned small business concerns;
- (iv) HUBZone small business concerns;
- (v) Small disadvantaged business concerns; and
- (vi) Women-owned small business concerns.

(7) The name of the individual employed by the offeror who will administer the offeror's subcontracting program, and a description of the duties of the individual.

(8) A description of the efforts the offeror will make to assure that small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns have an equitable opportunity to compete for subcontracts.

(9) Assurances that the offeror will include the clause of this contract entitled "Utilization of Small Business Concerns" in all subcontracts that offer further subcontracting opportunities, and that the offeror will require all subcontractors (except small business concerns) that receive subcontracts in excess of \$500,000 (\$1,000,000 for construction of any public facility) to adopt a subcontracting plan that complies with the requirements of this clause.

(10) Assurances that the offeror will—

(i) Cooperate in any studies or surveys as may be required;

(ii) Submit periodic reports so that the Government can determine the extent of compliance by the offeror with the subcontracting plan;

(iii) Submit Standard Form (SF) 294, Subcontracting Report for Individual Contracts, and/or SF 295, Summary Subcontract Report, in accordance with paragraph (j) of this clause. The reports shall provide information on subcontract awards to small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, women-owned small business concerns, and Historically Black Colleges and Universities and Minority Institutions. Reporting shall be in accordance with the instructions on the forms or as provided in agency regulations.

(iv) Ensure that its subcontractors agree to submit SF 294 and SF 295.

(11) A description of the types of records that will be maintained concerning procedures that have been adopted to comply with the requirements and goals in the plan, including establishing source lists; and a description of the offeror's efforts to locate small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns and award subcontracts to them. The records shall include at least the following (on a plant-wide or company-wide basis, unless otherwise indicated):

- (i) Source lists (*e.g.*, PRO-Net), guides, and other data that identify small business,

veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns.

(ii) Organizations contacted in an attempt to locate sources that are small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, or women-owned small business concerns.

(iii) Records on each subcontract solicitation resulting in an award of more than \$100,000, indicating—

- (A) Whether small business concerns were solicited and, if not, why not;
- (B) Whether veteran-owned small business concerns were solicited and, if not, why not;
- (C) Whether service-disabled veteran-owned small business concerns were solicited and, if not, why not;
- (D) Whether HUBZone small business concerns were solicited and, if not, why not;
- (E) Whether small disadvantaged business concerns were solicited and, if not, why not;
- (F) Whether women-owned small business concerns were solicited and, if not, why not; and

(G) If applicable, the reason award was not made to a small business concern.

(iv) Records of any outreach efforts to contact—

- (A) Trade associations;
- (B) Business development organizations;
- (C) Conferences and trade fairs to locate small, HUBZone small, small disadvantaged, and women-owned small business sources; and
- (D) Veterans service organizations.

(v) Records of internal guidance and encouragement provided to buyers through—

- (A) Workshops, seminars, training, etc.; and
- (B) Monitoring performance to evaluate compliance with the program's requirements.

(vi) On a contract-by-contract basis, records to support award data submitted by the offeror to the Government, including the name, address, and business size of each subcontractor. Contractors having commercial plans need not comply with this requirement.

(e) In order to effectively implement this plan to the extent consistent with efficient contract performance, the Contractor shall perform the following functions:

(1) Assist small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns by arranging solicitations, time for the preparation of bids, quantities, specifications, and delivery schedules so as to facilitate the participation by such concerns. Where the Contractor's lists of potential small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business subcontractors are excessively long, reasonable effort shall be made to give all such small business concerns an opportunity to compete over a period of time.

(2) Provide adequate and timely consideration of the potentialities of small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns in all "make-or-buy" decisions.

(3) Counsel and discuss subcontracting opportunities with representatives of small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business firms.

(4) Provide notice to subcontractors concerning penalties and remedies for misrepresentations of business status as small, veteran-owned small business, HUBZone small, small disadvantaged, or women-owned small business for the purpose of obtaining a subcontract that is to be included as part or all of a goal contained in the Contractor's subcontracting plan.

(f) A master plan on a plant or division-wide basis that contains all the elements required by paragraph (d) of this clause, except goals, may be incorporated by reference as a part of the subcontracting plan required of the offeror by this clause; provided —

- (1) The master plan has been approved;
- (2) The offeror ensures that the master plan is updated as necessary and provides copies of the approved master plan, including evidence of its approval, to the Contracting Officer; and
- (3) Goals and any deviations from the master plan deemed necessary by the Contracting Officer to satisfy the requirements of this contract are set forth in the individual subcontracting plan.

(g) A commercial plan is the preferred type of subcontracting plan for contractors furnishing commercial items. The commercial plan shall relate to the offeror's planned subcontracting generally, for both commercial and Government business, rather than solely to the Government contract. Commercial plans are also preferred for subcontractors that provide commercial items under a prime contract, whether or not the prime contractor is supplying a commercial item.

(h) Prior compliance of the offeror with other such subcontracting plans under previous contracts will be considered by the Contracting Officer in determining the responsibility of the offeror for award of the contract.

(i) The failure of the Contractor or subcontractor to comply in good faith with—

- (1) The clause of this contract entitled "Utilization Of Small Business Concerns;" or
- (2) An approved plan required by this clause, shall be a material breach of the contract.

(j) The Contractor shall submit the following reports:

(1) *Standard Form 294, Subcontracting Report for Individual Contracts*. This report shall be submitted to the Contracting Officer semiannually and at contract completion. The report covers subcontract award data related to this contract. This report is not required for commercial plans.

(2) *Standard Form 295, Summary Subcontract Report*. This report encompasses all of the contracts with the awarding agency. It must be submitted semi-annually for contracts with the Department of Defense and annually for contracts with civilian agencies. If the reporting activity is covered by a commercial plan, the reporting activity must report annually all subcontract awards under that plan. All reports submitted at the close of each fiscal year (both individual and commercial plans) shall include a breakout, in the Contractor's format, of subcontract awards, in whole dollars, to small disadvantaged business concerns by North American Industry Classification System (NAICS) Industry Subsector. For a commercial plan, the Contractor may obtain from each of its subcontractors a predominant NAICS Industry Subsector and report all awards to that subcontractor under its predominant NAICS Industry Subsector.

(End of clause)

27. DFARS 252.219-7009 SECTION 8(a) DIRECT AWARD (MAR 2002) [When Competitive 8(a) Contracting Procedures are used]

(a) This contract is issued as a direct award between the contracting office and the 8(a) Contractor pursuant to the Partnership Agreement dated February 1, 2002, between the Small Business Administration (SBA) and the Department of Defense. Accordingly, the SBA, even if not identified in Section A of this contract, is the prime contractor and retains responsibility for 8(a) certification, for 8(a) eligibility determinations and related issues, and for providing counseling and assistance to the 8(a) Contractor under the 8(a) Program. The cognizant SBA district office is:

[To be completed by the Contracting Officer at the time of award]

(b) The contracting office is responsible for administering the contract and for taking any action on behalf of the Government under the terms and conditions of the contract; provided that the contracting office shall give advance notice to the SBA before it issues a final notice terminating performance, either in whole or in part, under

the contract. The contracting office also shall coordinate with the SBA prior to processing any novation agreement. The contracting office may assign contract administration functions to a contract administration office.

(c) The 8(a) Contractor agrees that--

(1) It will notify the Contracting Officer, simultaneous with its notification to the SBA (as required by SBA's 8(a) regulations at 13 CFR 124.308), when the owner or owners upon whom 8(a) eligibility is based plan to relinquish ownership or control of the concern. Consistent with Section 407 of Pub. L. 100-656, transfer of ownership or control shall result in termination of the contract for convenience, unless the SBA waives the requirement for termination prior to the actual relinquishing of ownership and control; and

(2) It will not subcontract the performance of any of the requirements of this contract without the prior written approval of the SBA and the Contracting Officer.

(End of clause)

28. *FAR 52.219-14 LIMITATIONS ON SUBCONTRACTING (DEC 1996) [For Small Business Set Aside Only]

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

(b) By submission of an offer and execution of a contract, the Offeror/Contractor agrees that in performance of the contract in the case of a contract for--

(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.

(2) Supplies (other than procurement from a nonmanufacturer of such supplies). The concern shall perform work for at least 50 percent of the cost of manufacturing the supplies, not including the cost of materials.

(3) 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.

(4) 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.

29. *FAR 52.219-16 LIQUIDATED DAMAGES-SUBCONTRACTING PLAN (JAN 1999)

(a) Failure to make a good faith effort to comply with the subcontracting plan, as used in this clause, means a willful or intentional failure to perform in accordance with the requirements of the subcontracting plan approved under the clause in this contract entitled "Small Business Subcontracting Plan," or willful or intentional action to frustrate the plan.

(b) Performance shall be measured by applying the percentage goals to the total actual subcontracting dollars or, if a commercial plan is involved, to the pro rata share of actual subcontracting dollars attributable to Government contracts covered by the commercial plan. If, at contract completion, or in the case of a commercial plan, at the close of the fiscal year for which the plan is applicable, the Contractor has failed to meet its subcontracting goals and the Contracting Officer decides in accordance with paragraph (c) of this clause that the Contractor failed to make a good faith effort to comply with its subcontracting plan, established in accordance with the clause in this contract entitled "Small Business Subcontracting Plan," the Contractor shall pay the Government liquidated damages in an amount stated. The amount of probable damages attributable to the Contractor's failure to comply shall be an amount equal to the actual dollar amount by which the Contractor failed to achieve each subcontract goal.

(c) Before the Contracting Officer makes a final decision that the Contractor has failed to make such good faith effort, the Contracting Officer shall give the Contractor written notice specifying the failure and permitting the Contractor to demonstrate what good faith efforts have been made and to discuss the matter. Failure

to respond to the notice may be taken as an admission that no valid explanation exists. If, after consideration of all the pertinent data, the Contracting Officer finds that the Contractor failed to make a good faith effort to comply with the subcontracting plan, the Contracting Officer shall issue a final decision to that effect and require that the Contractor pay the Government liquidated damages as provided in paragraph (b) of this clause.

(d) With respect to commercial plans, the Contracting Officer who approved the plan will perform the functions of the Contracting Officer under this clause on behalf of all agencies with contracts covered by a commercial plan.

(e) The Contractor shall have the right of appeal, under the clause in this contract entitled, Disputes, from any final decision of the Contracting Officer.

(f) Liquidated damages shall be in addition to any other remedies that the Government may have.

30. DFARS 252.219-7010 ALTERNATE A (JUN 1998) [When Competitive 8(a) Contracting Procedures are used]

As prescribed in 219.811-3(2), substitute the following paragraph (c) for paragraph (c) of the clause at FAR 52.219-18:

(c) Any award resulting from this solicitation will be made directly by the Contracting Officer to the successful 8(a) offeror selected through the evaluation criteria set forth in this solicitation.

31. FAR 52.219-18 NOTIFICATION OF COMPETITION LIMITED TO ELIGIBLE 8(A) CONCERNS (JUNE 2003) [When Competitive 8(a) Contracting Procedures are used]

(a) Offers are solicited only from small business concerns expressly certified by the Small Business Administration (SBA) for participation in the SBA's 8(a) Program and which meet the following criteria at the time of submission of offer--

(1) The Offeror is in conformance with the 8(a) support limitation set forth in its approved business plan; and

(2) The Offeror is in conformance with the Business Activity Targets set forth in its approved business plan or any remedial action directed by the SBA.

(b) By submission of its offer, the Offeror represents that it meets all of the criteria set forth in paragraph (a) of this clause.

(c) Any award resulting from this solicitation will be made to the Small Business Administration, which will subcontract performance to the successful 8(a) offeror selected through the evaluation criteria set forth in this solicitation.

(d) (1) Agreement. A small business concern submitting an offer in its own name agrees to furnish, in performing the contract, only end items manufactured or produced by small business concerns in the United States or its outlying areas. If this procurement is processed under simplified acquisition procedures and the total amount of this contract does not exceed \$25,000, a small business concern may furnish the product of any domestic firm. This subparagraph does not apply in connection with construction or service contracts.

(2) The [insert name of SBA's contractor] will notify the U.S. Army Corps of Engineers Contracting Officer in writing immediately upon entering an agreement (either oral or written) to transfer all or part of its stock or other ownership interest to any other party.

(End of clause)

32. FAR 52.219-27 NOTICE OF TOTAL SERVICE-DISABLED VETERAN-OWNED SMALL BUSINESS SET-ASIDE (MAY 2004)

[Applicable only to projects restricted to Service-disabled veteran-owned small business set- asides]

(a) *Definition.* "Service-disabled veteran-owned small business concern"-

(1) Means a small business concern-

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a service-disabled veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) "Service-disabled veteran" means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

(b) *General.*

(1) Offers are solicited only from service-disabled veteran-owned small business concerns. Offers received from concerns that are not service-disabled veteran-owned small business concerns shall not be considered.

(2) Any award resulting from this solicitation will be made to a service-disabled veteran-owned small business concern.

(c) *Agreement.* A service-disabled veteran-owned small business concern agrees that in the performance of the contract, in the case of a contract for-

(1) Services (except construction), at least 50 percent of the cost of personnel for contract performance will be spent for employees of the concern or employees of other service-disabled veteran-owned small business concerns;

(2) Supplies (other than acquisition from a nonmanufacturer of the supplies), at least 50 percent of the cost of manufacturing, excluding the cost of materials, will be performed by the concern or other service-disabled veteran-owned small business concerns;

(3) General construction, at least 15 percent of the cost of the contract performance incurred for personnel will be spent on the concern's employees or the employees of other service-disabled veteran-owned small business concerns; or

(4) Construction by special trade contractors, at least 25 percent of the cost of the contract performance incurred for personnel will be spent on the concern's employees or the employees of other service-disabled veteran-owned small business concerns.

(d) A joint venture may be considered a service-disabled veteran owned small business concern if-

(1) At least one member of the joint venture is a service-disabled veteran-owned small business concern, and makes the following representations: That it is a service-disabled veteran-owned small business concern, and that it is a small business concern under the North American Industry Classification Systems (NAICS) code assigned to the procurement;

(2) Each other concern is small under the size standard corresponding to the NAICS code assigned to the procurement; and

(3) The joint venture meets the requirements of paragraph 7 of the explanation of Affiliates in 19.101 of the Federal Acquisition Regulation.

(4) The joint venture meets the requirements of 13 CFR 125.15(b)

(e) Any service-disabled veteran-owned small business concern (nonmanufacturer) must meet the requirements in 19.102(f) of the Federal Acquisition Regulation to receive a benefit under this program.

(End of clause)

33. DFARS 252.219-7003 SMALL, SMALL DISADVANTAGED AND WOMEN-OWNED SMALL BUSINESS SUBCONTRACTING PLAN (DOD CONTRACTS) (APR 1996)

This clause supplements the Federal Acquisition Regulation 52.219-9, Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan, clause of this contract.

(a) Definitions.

"Historically black colleges and universities," as used in this clause, means institutions determined by the Secretary of Education to meet the requirements of 34 CFR Section 608.2. The term also means any nonprofit research institution that was an integral part of such a college or university before November 14, 1986.

"Minority institutions," as used in this clause, means institutions meeting the requirements of Section 1046(3) of the Higher Education Act of 1965 (20 U.S.C. 1135d-5(3)). The term also includes Hispanic-serving institutions as defined in Section 316(b)(1) of such Act (20 U.S.C. 1059c(b)(1)).

(b) Except for company or division-wide commercial products subcontracting plans, the term "small disadvantaged business," when used in the FAR 52.219-9 clause, includes historically black colleges and universities and minority institutions in addition to small disadvantaged business concerns.

(c) Work under the contract or its subcontracts shall be credited toward meeting the small disadvantaged business concern goal required by paragraph (d) of the FAR 52.219-9 clause when:

(1) It is performed on Indian lands or in joint venture with an Indian tribe or a tribally-owned corporation, and

(2) It meets the requirements of 10 U.S.C. 2323a.

(d) Subcontracts awarded to workshops approved by the Committee for Purchase from People Who are Blind or Severely Disabled (41 U.S.C. 46-48), may be counted toward the Contractor's small business subcontracting goal.

(e) A mentor firm, under the Pilot Mentor-Protege Program established under Section 831 of Pub. L. 101-510, as amended, may count toward its small disadvantaged business goal, subcontracts awarded--

(1) Protege firms which are qualified organizations employing the severely handicapped; and

(2) Former protege firms that meet the criteria in Section 831(g)(4) of Pub. L. 101-510.

(f) The master plan approval referred to in paragraph (f) of the FAR 52.219-9 clause is approval by the Contractor's cognizant contract administration activity.

(g) In those subcontracting plans which specifically identify small, small disadvantaged, and women-owned businesses, the Contractor shall notify the Administrative Contracting Officer of any substitutions of firms that are not small, small disadvantaged, or women-owned small businesses for the firms listed in the subcontracting plan. Notifications shall be in writing and shall occur within a reasonable period of time after award of the subcontract. Contractor-specified formats shall be acceptable.

34. DFARS 252.219-7004 SMALL, SMALL DISADVANTAGED AND WOMEN-OWNED SMALL BUSINESS SUBCONTRACTING PLAN (TEST PROGRAM) (JUN 1997)

(a) Definition. "Subcontract," as used in this clause, means any agreement (other than one involving an employer-employee relationship) entered into by a Federal Government prime Contractor or subcontractor calling for supplies or services required for performance of the contract or subcontract.

(b) The Offeror's comprehensive small business subcontracting plan and its successors, which are authorized by and approved under the test program of Section 834 of Pub. L. 101-189, shall be included in and made a part of the resultant contract. Upon expulsion from the test program or expiration of the test program, the Contractor shall negotiate an individual subcontracting plan for all future contracts that meet the requirements of Section 211 of Publ. L. 95-507.

(c) The Contractor shall submit Standard Form 295, Summary Subcontract Report, in accordance with the instructions on the form, except--

(1) One copy of SF 295 and attachments shall be submitted to Director, Small and Disadvantaged Business Utilization, Office of the Deputy Under Secretary of Defense (International and Commercial Programs), 3061 Defense Pentagon, Room 2A338, Washington, DC 20301-3061; and

(2) Item 14, Remarks, shall be completed to include semi-annual cumulative--

(1) Small business, small disadvantaged business and women-owned small business goals; and

(2) Small business and small disadvantaged business goals, actual accomplishments, and percentages for each of the two designated industry categories.

(d) The failure of the Contractor or subcontractor to comply in good faith with (1) the clause of this contract entitled "Utilization of Small, Small Disadvantaged and Women-Owned Small Business Concerns," or (2) an approved plan required by this clause, shall be a material breach of the contract.

35. *FAR 52.222-3 CONVICT LABOR (JUNE 2003)

(a) Except as provided in paragraph (b) of this clause, the Contractor shall not employ in the performance of this contract any person undergoing a sentence of imprisonment imposed by any court of a State, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, or the U.S. Virgin Islands.

(b) The Contractor is not prohibited from employing persons—

(1) On parole or probation to work at paid employment during the term of their sentence;

(2) Who have been pardoned or who have served their terms; or

(3) Confined for violation of the laws of any of the States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, or the U.S. Virgin Islands who are authorized to work at paid employment in the community under the laws of such jurisdiction, if—

(i) The worker is paid or is in an approved work training program on a voluntary basis;

(ii) Representatives of local union central bodies or similar labor union organizations have been consulted;

(iii) Such paid employment will not result in the displacement of employed workers, or be applied in skills, crafts, or trades in which there is a surplus of available gainful labor in the locality, or impair existing contracts for services;

(iv) The rates of pay and other conditions of employment will not be less than those paid or provided for work of a similar nature in the locality in which the work is being performed; and

(v) The Attorney General of the United States has certified that the work-release laws or regulations of the jurisdiction involved are in conformity with the requirements of Executive Order 11755, as amended by Executive Orders 12608 and 12943. (End of clause)

36. *FAR 52.222-4 CONTRACT WORK HOURS AND SAFETY STANDARDS ACT—OVERTIME COMPENSATION (SEPT 2000)

(a) *Overtime requirements.* No Contractor or subcontractor employing laborers or mechanics (see Federal Acquisition Regulation 22.300) shall require or permit them to work over 40 hours in any workweek unless they are paid at least 1 and 1/2 times the basic rate of pay for each hour worked over 40 hours.

(b) *Violation; liability for unpaid wages; liquidated damages.* The responsible Contractor and subcontractor are liable for unpaid wages if they violate the terms in paragraph (a) of this clause. In addition, the Contractor and subcontractor are liable for liquidated damages payable to the Government. The Contracting Officer will assess liquidated damages at the rate of \$10 per affected employee for each calendar day on which the employer required or permitted the employee to work in excess of the standard workweek of 40 hours without paying overtime wages required by the Contract Work Hours and Safety Standards Act.

(c) *Withholding for unpaid wages and liquidated damages.* The Contracting Officer will withhold from payments due under the contract sufficient funds required to satisfy any Contractor or subcontractor liabilities for unpaid wages and liquidated damages. If amounts withheld under the contract are insufficient to satisfy Contractor or subcontractor liabilities, the Contracting Officer will withhold payments from other Federal or Federally assisted contracts held by the same Contractor that are subject to the Contract Work Hours and Safety Standards Act.

(d) *Payrolls and basic records.* (1) The Contractor and its subcontractors shall maintain payrolls and basic payroll records for all laborers and mechanics working on the contract during the contract and shall make them available to the Government until 3 years after contract completion. The records shall contain the name and address of each employee, social security number, labor classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. The records need not duplicate those required for construction work by Department of Labor regulations at 29 CFR 5.5(a)(3) implementing the Davis-Bacon Act .

(2) The Contractor and its subcontractors shall allow authorized representatives of the Contracting Officer or the Department of Labor to inspect, copy, or transcribe records maintained under paragraph (d)(1) of this clause. The Contractor or subcontractor also shall allow authorized representatives of the Contracting Officer or Department of Labor to interview employees in the workplace during working hours.

(e) *Subcontracts*. The Contractor shall insert the provisions set forth in paragraphs (a) through (d) of this clause in subcontracts exceeding \$100,000 and require subcontractors to include these provisions in any lower-tier subcontracts. The Contractor shall be responsible for compliance by any subcontractor or lower-tier subcontractor with the provisions set forth in paragraphs (a) through (d) of this clause.
(End of clause)

37. *FAR 52.222-6 DAVIS-BACON ACT (FEB 1995)

(a) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (d) of this clause; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such period. Such laborers and mechanics shall be paid not less than the appropriate wage rate and fringe benefits in the wage determination for the classification of work actually performed, without regard to skill, except as provided in the clause entitled Apprentices and Trainees. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein; provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph (b) of this clause) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

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

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

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

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

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

(3) In the event the Contractor, the laborers or mechanics to be employed in the classification, or their representatives, and the Contracting Officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the Contracting Officer shall refer the questions, including the views of all interested parties and the recommendation of the Contracting Officer, to the Administrator of the Wage and Hour Division for determination. The Administrator, or an authorized

representative, will issue a determination within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

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

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

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

38. *FAR 52.222-7 WITHHOLDING OF FUNDS (FEB 1988)

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

39. *FAR 52.222-8 PAYROLLS AND BASIC RECORDS (FEB 1988)

(a) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of 3 years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid. Whenever the Secretary of Labor has found, under paragraph (d) of the clause entitled Davis-Bacon Act, that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(b) (1) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Contracting Officer. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under paragraph (a) of this clause. This information may be submitted in any form desired. Optional Form WH-347 (Federal Stock Number 029-005-00014-1) is available for this purpose and may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. The Prime Contractor is responsible for the submission of copies of payrolls by all subcontractors.

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

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

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

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

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

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

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

40. *FAR 52.222-9 APPRENTICES AND TRAINEES (FEB 1988)

(a) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in this paragraph, shall be paid not less than the applicable wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a Contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency

recognized by the Bureau, withdraws approval of an apprenticeship program, the Contractor will not longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(b) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed in the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate in the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate in the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate in the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

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

41. *FAR 52.222-10 COMPLIANCE WITH COPELAND ACT REQUIREMENTS (FEB 1988)

The Contractor shall comply with the requirements of 29 CFR Part 3, which are hereby incorporated by reference in this contract.

42. *FAR 52.222-11 SUBCONTRACTS (LABOR STANDARDS) (FEB 1988)

(a) The Contractor or subcontractor shall insert in any subcontracts the clauses entitled Davis-Bacon Act, Contract Work Hours and Safety Standards Act--Overtime Compensation, Apprentices and Trainees, Payrolls and Basic Records, Compliance with Copeland Act Requirements, Withholding of Funds, Subcontracts (Labor Standards), Contract Termination--Debarment, Disputes Concerning Labor Standards, Compliance with Davis-Bacon and Related Act Regulations, and Certification of Eligibility, and such other clauses as the Contracting Officer may, by appropriate instructions, require, and also a clause requiring subcontractors to include these clauses in any lower tier subcontracts. The Prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with all the contract clauses cited in this paragraph.

(b) (1) Within 14 days after award of the contract, the Contractor shall deliver to the Contracting Officer a completed Statement and Acknowledgment Form (SF 1413) for each subcontract, including the subcontractor's signed and dated acknowledgment that the clauses set forth in paragraph (a) of this clause have been included in the subcontract.

(2) Within 14 days after the award of any subsequently awarded subcontract the Contractor shall deliver to the Contracting Officer an updated completed SF 1413 for such additional subcontract.

43. *FAR 52.222-12 CONTRACT TERMINATION--DEBARMENT (FEB 1988)

A breach of the contract clauses entitled Davis-Bacon Act, Contract Work Hours and Safety Standards Act-Overtime Compensation, Apprentices and Trainees, Payrolls and Basic Records, Compliance with Copeland Act Requirements, Subcontracts (Labor Standards), Compliance with Davis-Bacon and Related Act Regulations, or Certification of Eligibility may be grounds for termination of the contract, and for debarment as a Contractor and subcontractor as provided in 29 CFR 5.12.

44. *FAR 52.222-13 COMPLIANCE WITH DAVIS-BACON AND RELATED ACT REGULATIONS (FEB 1988)

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are hereby incorporated by reference in this contract.

45. *FAR 52.222-14 DISPUTES CONCERNING LABOR STANDARDS (FEB 1988)

The United States Department of Labor has set forth in 29 CFR Parts 5, 6, and 7 procedures for resolving disputes concerning labor standards requirements. Such disputes shall be resolved in accordance with those procedures and not the Disputes clause of this contract. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency the U.S. Department of Labor, or the employees of their representatives.

46. *FAR 52.222-15 CERTIFICATION OF ELIGIBILITY (FEB 1988)

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

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

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

47. *FAR 52.222-26 EQUAL OPPORTUNITY (APR 2002)

(a) *Definition.* "United States," as used in this clause, means the 50 States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, and Wake Island.

(b) If, during any 12-month period (including the 12 months preceding the award of this contract), the Contractor has been or is awarded nonexempt Federal contracts and/or subcontracts that have an aggregate value in excess of \$10,000, the Contractor shall comply with paragraphs (b)(1) through (b)(11) of this clause, except for work performed outside the United States by employees who were not recruited within the United States. Upon request, the Contractor shall provide information necessary to determine the applicability of this clause.

(1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. However, it shall not be a violation of this clause for the Contractor to extend a publicly announced preference in employment to Indians living on or near an Indian reservation, in connection with employment opportunities on or near an Indian reservation, as permitted by 41 CFR 60-1.5.

(2) The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. This shall include, but not be limited to—

- (i) Employment;
- (ii) Upgrading;
- (iii) Demotion;

- (iv) Transfer;
- (v) Recruitment or recruitment advertising;
- (vi) Layoff or termination;
- (vii) Rates of pay or other forms of compensation; and
- (viii) Selection for training, including apprenticeship.

(3) The Contractor shall post in conspicuous places available to employees and applicants for employment the notices to be provided by the Contracting Officer that explain this clause.

(4) The Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(5) The Contractor shall send, to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, the notice to be provided by the Contracting Officer advising the labor union or workers' representative of the Contractor's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.

(6) The Contractor shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.

(7) The Contractor shall furnish to the contracting agency all information required by Executive Order 11246, as amended, and by the rules, regulations, and orders of the Secretary of Labor. The Contractor shall also file Standard Form 100 (EEO-1), or any successor form, as prescribed in 41 CFR part 60-1. Unless the Contractor has filed within the 12 months preceding the date of contract award, the Contractor shall, within 30 days after contract award, apply to either the regional Office of Federal Contract Compliance Programs (OFCCP) or the local office of the Equal Employment Opportunity Commission for the necessary forms.

(8) The Contractor shall permit access to its premises, during normal business hours, by the contracting agency or the OFCCP for the purpose of conducting on-site compliance evaluations and complaint investigations. The Contractor shall permit the Government to inspect and copy any books, accounts, records (including computerized records), and other material that may be relevant to the matter under investigation and pertinent to compliance with Executive Order 11246, as amended, and rules and regulations that implement the Executive Order.

(9) If the OFCCP determines that the Contractor is not in compliance with this clause or any rule, regulation, or order of the Secretary of Labor, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order 11246, as amended. In addition, sanctions may be imposed and remedies invoked against the Contractor as provided in Executive Order 11246, as amended; in the rules, regulations, and orders of the Secretary of Labor; or as otherwise provided by law.

(10) The Contractor shall include the terms and conditions of paragraphs (b)(1) through (11) of this clause in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

(11) The Contractor shall take such action with respect to any subcontract or purchase order as the Contracting Officer may direct as a means of enforcing these terms and conditions, including sanctions for noncompliance, provided, that if the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

(c) Notwithstanding any other clause in this contract, disputes relative to this clause will be governed by the procedures in 41 CFR 60-1.1.

(End of clause)

48. *FAR 52.222-27 AFFIRMATIVE ACTION COMPLIANCE REQUIREMENTS FOR CONSTRUCTION (FEB 1999)

- (a) Definitions.

"Covered area," as used in this clause, means the geographical area described in the solicitation for this contract.

“Deputy Assistant Secretary,” as used in this clause, means the Deputy Assistant Secretary for Federal Contract Compliance, U.S. Department of Labor, or a designee

"Employer's identification number," as used in this clause, means the Federal Social Security number used on the employer's quarterly Federal tax return, U.S. Treasury Department Form 941.

"Minority," as used in this clause, means--

(1) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

(2) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands);

(3) Black (all persons having origins in any of the black African racial groups not of Hispanic origin); and

(4) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race).

(b) If the Contractor, or a subcontractor at any tier, subcontracts a portion of the work involving any construction trade each such subcontract in excess of \$10,000 shall include this clause and the Notice containing the goals for minority and female participation stated in the solicitation for this contract.

(c) If the Contractor is participating in a Hometown Plan (41 CFR 60-4) approved by the U.S. Department of Labor in a covered area, either individually or through an association, its affirmative action obligations on all work in the plan area (including goals) shall comply with the plan for those trades that have unions participating in the plan. Contractors must be able to demonstrate participation in, and compliance with, the provisions of the plan. Each Contractor or subcontractor participating in an approved plan is also required to comply with its obligations under the Equal Opportunity clause, and to make a good faith effort to achieve each goal under the plan in each trade in which it has employees. The overall good-faith performance by other Contractors or subcontractors toward a goal in an approved plan does not excuse any Contractor's or subcontractor's failure to make good-faith efforts to achieve the plan's goals.

(d) The Contractor shall implement the affirmative action procedures in subparagraphs (g)(1) through (16) of this clause. The goals stated in the solicitation for this contract are expressed as percentages of the total hours of employment and training of minority and female utilization that the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for the geographical area where that work is actually performed. The Contractor is expected to make substantially uniform progress toward its goals in each craft.

(e) Neither the terms and conditions of any collective bargaining agreement, nor the failure by a union with which the Contractor has a collective bargaining agreement, to refer minorities or women shall excuse the Contractor's obligations under this clause, Executive Order 11246, as amended, or the regulations thereunder.

(f) In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

(g) The Contractor shall take affirmative action to ensure equal employment opportunity. The evaluation of the Contractor's compliance with this clause shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully and implement affirmative action steps at least as extensive as the following:

(1) Ensure a working environment free of harassment, intimidation, and coercion at all sites and in all facilities where the Contractor's employees are assigned to work. The Contractor, if possible, will assign two or more women to each construction project. The Contractor shall ensure that foremen, superintendents, and other onsite supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at these sites or facilities.

(2) Establish and maintain a current list of sources for minority and female recruitment. Provide written notification to minority and female recruitment sources and community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

(3) Establish and maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant, referrals of minorities or females from unions, recruitment sources, or community organizations, and the action taken with respect to each individual. If an individual was sent to the union hiring hall for referral and not referred back to the Contractor by the union or, if referred back, not employed by the Contractor, this shall be documented in the file, along with whatever additional actions the Contractor may have taken.

(4) Immediately notify the Deputy Assistant Secretary when the union or unions with which the Contractor has a collective bargaining agreement has not referred back to the Contractor a minority or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

(5) Develop on-the-job training opportunities and/or participate in training programs for the area that expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under subparagraph (g)(2) of this clause.

(6) Disseminate the Contractor's equal employment policy by--

- (i) Providing notice of the policy to unions and to training, recruitment, and outreach programs, and requesting their cooperation in assisting the Contractor in meeting its contract obligations;
- (ii) Including the policy in any policy manual and in collective bargaining agreements;
- (iii) Publicizing the policy in the company newspaper, annual report, etc.;
- (iv) Reviewing the policy with all management personnel and with all minority and female employees at least once a year; and
- (v) Posting the policy on bulletin boards accessible to employees at each location where construction work is performed.

(7) Review, at least annually, the Contractor's equal employment policy and affirmative action obligations with all employees having responsibility for hiring, assignment, layoff, termination, or other employment decisions. Conduct review of this policy with all on-site supervisory personnel before initiating construction work at a job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

(8) Disseminate the Contractor's equal employment policy externally by including it in any advertising in the news media, specifically including minority and female news media. Provide written notification to, and discuss this policy with, other Contractors and subcontractors with which the Contractor does or anticipates doing business.

(9) Direct recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students, and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than 1 month before the date for acceptance of applications for apprenticeship or training by any recruitment source, send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

(10) Encourage present minority and female employees to recruit minority persons and women. Where reasonable, provide after-school, summer, and vacation employment to minority and female youth both on the site and in other areas of the Contractor's workforce.

(11) Validate all tests and other selection requirements where required under 41 CFR 60-3.

(12) Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities. Encourage these employees to seek or to prepare for, through appropriate training, etc., opportunities for promotion.

(13) Ensure that seniority practices job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment-related activities to ensure that the Contractor's obligations under this contract are being carried out.

(14) Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

(15) Maintain a record of solicitations for subcontracts for minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

(16) Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's equal employment policy and affirmative action obligations.

(h) The Contractor is encouraged to participate in voluntary associations that may assist in fulfilling one or more of the affirmative action obligations contained in subparagraphs (g)(1) through (16) of this clause. The efforts of a contractor association, joint contractor-union, contractor-community, or similar group of which the contractor is a member and participant may be asserted as fulfilling one or more of its obligations under subparagraphs (g)(1) through (16) of this clause, provided the Contractor--

(1) Actively participates in the group;
(2) Makes every effort to ensure that the group has a positive impact on the employment of minorities and women in the industry;
(3) Ensures that concrete benefits of the program are reflected in the Contractor's minority and female workforce participation;
(4) Makes a good-faith effort to meet its individual goals and timetables; and
(5) Can provide access to documentation that demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply is the Contractor's, and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

(i) A single goal for minorities and a separate single goal for women shall be established. The Contractor is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and nonminority. Consequently, the Contractor may be in violation of Executive Order 11246, as amended, if a particular group is employed in a substantially disparate manner.

(j) The Contractor shall not use goals or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

(k) The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts under Executive Order 11246, as amended.

(l) The Contractor shall carry out such sanctions and penalties for violation of this clause and of the Equal Opportunity clause, including suspension, termination, and cancellation of existing subcontracts, as may be imposed or ordered under Executive Order 11246, as amended, and its implementing regulations, by the OFCCP. Any failure to carry out these sanctions and penalties as ordered shall be a violation of this clause and Executive Order 11246, as amended.

(m) The Contractor in fulfilling its obligations under this clause shall implement affirmative action procedures at least as extensive as those prescribed in paragraph (g) of this clause, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of Executive Order 11246, as amended, the implementing regulations, or this clause, the Deputy Assistant Secretary shall take action as prescribed in 41 CFR 60-4.8.

(n) The Contractor shall designate a responsible official to--
(1) Monitor all employment-related activity to ensure that the Contractor's equal employment policy is being carried out;
(2) Submit reports as may be required by the Government; and
(3) Keep records that shall at least include for each employee the name, address, telephone number, construction trade, union affiliation (if any), employee identification number, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, separate records are not required to be maintained.

(o) Nothing contained herein shall be construed as a limitation upon the application of other laws that establish different standards of compliance or upon the requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

49. *FAR 52.222-35 EQUAL OPPORTUNITY FOR SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS (DEC 2001)

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

“All employment openings” means all positions except executive and top management, those positions that will be filled from within the Contractor's organization, and positions lasting 3 days or less. This term includes full-time employment, temporary employment of more than 3 days duration, and part-time employment.

“Executive and top management” means any employee—

(1) Whose primary duty consists of the management of the enterprise in which the individual is employed or of a customarily recognized department or subdivision thereof;

(2) Who customarily and regularly directs the work of two or more other employees;

(3) Who has the authority to hire or fire other employees or whose suggestions and recommendations as to the hiring or firing and as to the advancement and promotion or any other change of status of other employees will be given particular weight;

(4) Who customarily and regularly exercises discretionary powers; and

(5) Who does not devote more than 20 percent or, in the case of an employee of a retail or service establishment, who does not devote more than 40 percent of total hours of work in the work week to activities that are not directly and closely related to the performance of the work described in paragraphs

(1) through (4) of this definition. This paragraph (5) does not apply in the case of an employee who is in sole charge of an establishment or a physically separated branch establishment, or who owns at least a 20 percent interest in the enterprise in which the individual is employed.

“Other eligible veteran” means any other veteran who served on active duty during a war or in a campaign or expedition for which a campaign badge has been authorized.

“Positions that will be filled from within the Contractor's organization” means employment openings for which the Contractor will give no consideration to persons outside the Contractor's organization (including any affiliates, subsidiaries, and parent companies) and includes any openings the Contractor proposes to fill from regularly established “recall” lists. The exception does not apply to a particular opening once an employer decides to consider applicants outside of its organization.

“Qualified special disabled veteran” means a special disabled veteran who satisfies the requisite skill, experience, education, and other job-related requirements of the employment position such veteran holds or desires, and who, with or without reasonable accommodation, can perform the essential functions of such position.

“Special disabled veteran” means—

(1) A veteran who is entitled to compensation (or who but for the receipt of military retired pay would be entitled to compensation) under laws administered by the Department of Veterans Affairs for a disability—

(i) Rated at 30 percent or more; or

(ii) Rated at 10 or 20 percent in the case of a veteran who has been determined under 38 U.S.C. 3106 to have a serious employment handicap (*i.e.*, a significant impairment of the veteran's ability to prepare for, obtain, or retain employment consistent with the veteran's abilities, aptitudes, and interests); or

(2) A person who was discharged or released from active duty because of a service-connected disability.

“Veteran of the Vietnam era” means a person who—

(1) Served on active duty for a period of more than 180 days and was discharged or released from active duty with other than a dishonorable discharge, if any part of such active duty occurred—

(i) In the Republic of Vietnam between February 28, 1961, and May 7, 1975; or

(ii) Between August 5, 1964, and May 7, 1975, in all other cases; or

(2) Was discharged or released from active duty for a service-connected disability if any part of the active duty was performed—

(i) In the Republic of Vietnam between February 28, 1961, and May 7, 1975; or

(ii) Between August 5, 1964, and May 7, 1975, in all other cases.

(b) *General.* (1) The Contractor shall not discriminate against the individual because the individual is a special disabled veteran, a veteran of the Vietnam era, or other eligible veteran, regarding any position for which the employee or applicant for employment is qualified. The Contractor shall take affirmative action to employ, advance in employment, and otherwise treat qualified special disabled veterans, veterans of the Vietnam era, and other

eligible veterans without discrimination based upon their disability or veterans' status in all employment practices such as—

- (i) Recruitment, advertising, and job application procedures;
 - (ii) Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff and rehiring;
 - (iii) Rate of pay or any other form of compensation and changes in compensation;
 - (iv) Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;
 - (v) Leaves of absence, sick leave, or any other leave;
 - (vi) Fringe benefits available by virtue of employment, whether or not administered by the Contractor;
 - (vii) Selection and financial support for training, including apprenticeship, and on-the-job training under 38 U.S.C. 3687, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;
 - (viii) Activities sponsored by the Contractor including social or recreational programs;
- and
- (ix) Any other term, condition, or privilege of employment.

(2) The Contractor shall comply with the rules, regulations, and relevant orders of the Secretary of Labor issued under the Vietnam Era Veterans' Readjustment Assistance Act of 1972 (the Act), as amended (38 U.S.C. 4211 and 4212).

(c) *Listing openings.* (1) The Contractor shall immediately list all employment openings that exist at the time of the execution of this contract and those which occur during the performance of this contract, including those not generated by this contract, and including those occurring at an establishment of the Contractor other than the one where the contract is being performed, but excluding those of independently operated corporate affiliates, at an appropriate local public employment service office of the State wherein the opening occurs. Listing employment openings with the U.S. Department of Labor's America's Job Bank shall satisfy the requirement to list jobs with the local employment service office.

(2) The Contractor shall make the listing of employment openings with the local employment service office at least concurrently with using any other recruitment source or effort and shall involve the normal obligations of placing a bona fide job order, including accepting referrals of veterans and nonveterans. This listing of employment openings does not require hiring any particular job applicant or hiring from any particular group of job applicants and is not intended to relieve the Contractor from any requirements of Executive orders or regulations concerning nondiscrimination in employment.

(3) Whenever the Contractor becomes contractually bound to the listing terms of this clause, it shall advise the State public employment agency in each State where it has establishments of the name and location of each hiring location in the State. As long as the Contractor is contractually bound to these terms and has so advised the State agency, it need not advise the State agency of subsequent contracts. The Contractor may advise the State agency when it is no longer bound by this contract clause.

(d) *Applicability.* This clause does not apply to the listing of employment openings that occur and are filled outside the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, American Samoa, Guam, the Virgin Islands of the United States, and Wake Island.

(e) *Postings.* (1) The Contractor shall post employment notices in conspicuous places that are available to employees and applicants for employment.

- (2) The employment notices shall—
 - (i) State the rights of applicants and employees as well as the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified employees and applicants who are special disabled veterans, veterans of the Vietnam era, and other eligible veterans; and
 - (ii) Be in a form prescribed by the Deputy Assistant Secretary for Federal Contract Compliance Programs, Department of Labor (Deputy Assistant Secretary of Labor), and provided by or through the Contracting Officer.

(3) The Contractor shall ensure that applicants or employees who are special disabled veterans are informed of the contents of the notice (e.g., the Contractor may have the notice read to a visually disabled veteran, or may lower the posted notice so that it can be read by a person in a wheelchair).

(4) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement, or other contract understanding, that the Contractor is bound by the terms of the Act and is committed to take affirmative action to employ, and advance in employment, qualified special disabled veterans, veterans of the Vietnam era, and other eligible veterans.

(f) *Noncompliance.* If the Contractor does not comply with the requirements of this clause, the Government may take appropriate actions under the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

(g) *Subcontracts.* The Contractor shall insert the terms of this clause in all subcontracts or purchase orders of \$25,000 or more unless exempted by rules, regulations, or orders of the Secretary of Labor. The Contractor shall act as specified by the Deputy Assistant Secretary of Labor to enforce the terms, including action for noncompliance.

(End of clause)

50. *FAR 52.222-36 AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES (JUN 1998)

(a) General.

(1) Regarding any position for which the employee or applicant for employment is qualified, the Contractor shall not discriminate against any employee or applicant because of physical or mental disability. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified individuals with disabilities without discrimination based upon their physical or mental disability in all employment practices such as--

- (i) Recruitment, advertising, and job application procedures;
- (ii) Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff, and rehiring;
- (iii) Rates of pay or other forms of compensation and changes in compensation;
- (iv) Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;
- (v) Leaves of absence, sick leave, or any other leave;
- (vi) Fringe benefits available by virtue of employment, whether or not administered by the Contractor;
- (vii) Selection and financial support for training, including apprenticeships, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;
- (viii) Activities sponsored by the Contractor, including social or recreational programs; and
- (ix) Any other term, condition, or privilege of employment.

(2) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor (Secretary) issued under the Rehabilitation Act of 1973 (29 U.S.C. 793) (the Act), as amended.

(b) Postings.

- (1) The Contractor agrees to post employment notices stating--
- (i) The Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified individuals with disabilities; and
 - (ii) The rights of applicants and employees.
- (2) These notices shall be posted in conspicuous places that are available to employees and applicants for employment. The Contractor shall ensure that applicants and employees with disabilities are informed of the contents of the notice (e.g., the Contractor may have the notice read to visually disabled individual, or may lower the posted notice so that it might be read by a person in a wheelchair). The notices shall be in a form prescribed by the Deputy Assistant Secretary for Federal Contract Compliance of the U.S. Department of Labor (Deputy Assistant Secretary) and shall be provided by or through the Contracting Officer.
- (3) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of Section 503 of the Act and is committed to take affirmative action to employ, and advance in employment, qualified individuals with physical or mental disabilities.

(c) Noncompliance. If the Contractor does not comply with the requirements of this clause, appropriate actions may be taken under the rules, regulations, and relevant orders of the Secretary issued pursuant to the Act.

(d) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order in excess of \$10,000 unless exempted by rules, regulations, or orders of the Secretary. The Contractor shall act as specified by the Deputy Assistant Secretary to enforce the terms, including action for noncompliance.

51. *FAR 52.222-37 EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS (DEC 2001)

(a) Unless the Contractor is a State or local government agency, the Contractor shall report at least annually, as required by the Secretary of Labor, on—

(1) The number of special disabled veterans, the number of veterans of the Vietnam era, and other eligible veterans in the workforce of the Contractor by job category and hiring location; and

(2) The total number of new employees hired during the period covered by the report, and of the total, the number of special disabled veterans, the number of veterans of the Vietnam era, and the number of other eligible veterans; and

(3) The maximum number and the minimum number of employees of the Contractor during the period covered by the report.

(b) The Contractor shall report the above items by completing the Form VETS-100, entitled “Federal Contractor Veterans’ Employment Report (VETS-100 Report)”.

(c) The Contractor shall submit VETS-100 Reports no later than September 30 of each year beginning September 30, 1988.

(d) The employment activity report required by paragraph (a)(2) of this clause shall reflect total hires during the most recent 12-month period as of the ending date selected for the employment profile report required by paragraph (a)(1) of this clause. Contractors may select an ending date—

(1) As of the end of any pay period between July 1 and August 31 of the year the report is due; or

(2) As of December 31, if the Contractor has prior written approval from the Equal Employment Opportunity Commission to do so for purposes of submitting the Employer Information Report EEO-1 (Standard Form 100).

(e) The Contractor shall base the count of veterans reported according to paragraph (a) of this clause on voluntary disclosure. Each Contractor subject to the reporting requirements at 38 U.S.C. 4212 shall invite all special disabled veterans, veterans of the Vietnam era, and other eligible veterans who wish to benefit under the affirmative action program at 38 U.S.C. 4212 to identify themselves to the Contractor. The invitation shall state that—

(1) The information is voluntarily provided;

(2) The information will be kept confidential;

(3) Disclosure or refusal to provide the information will not subject the applicant or employee to any adverse treatment; and

(4) The information will be used only in accordance with the regulations promulgated under 38 U.S.C. 4212.

(f) The Contractor shall insert the terms of this clause in all subcontracts or purchase orders of \$25,000 or more unless exempted by rules, regulations, or orders of the Secretary of Labor.

(End of clause)

52. *FAR 52.222-38 COMPLIANCE WITH VETERANS’ EMPLOYMENT REPORTING REQUIREMENTS (DEC 2001)

By submission of its offer, the offeror represents that, if it is subject to the reporting requirements of 38 U.S.C. 4212(d) (*i.e.*, if it has any contract containing Federal Acquisition Regulation clause 52.222-37, Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans), it has submitted the most recent VETS-100 Report required by that clause.

(End of provision)

53. *FAR 52.223-5 POLLUTION PREVENTION AND RIGHT-TO-KNOW INFORMATION (AUG 2003) [For Work on Federal Facilities]

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

“Priority chemical” means a chemical identified by the Interagency Environmental Leadership Workgroup or, alternatively, by an agency pursuant to Section 503 of Executive Order 13148 of April 21, 2000, Greening the Government through Leadership in Environmental Management.

“Toxic chemical” means a chemical or chemical category listed in 40 CFR 372.65.

(b) Executive Order 13148 requires Federal facilities to comply with the provisions of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11001-11050) and the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13101-13109).

(c) The Contractor shall provide all information needed by the Federal facility to comply with the following:

- (1) The emergency planning reporting requirements of Section 302 of EPCRA.
- (2) The emergency notice requirements of Section 304 of EPCRA.
- (3) The list of Material Safety Data Sheets, required by Section 311 of EPCRA.
- (4) The emergency and hazardous chemical inventory forms of Section 312 of EPCRA.
- (5) The toxic chemical release inventory of Section 313 of EPCRA, which includes the reduction and recycling information required by Section 6607 of PPA.
- (6) The toxic chemical, priority chemical, and hazardous substance release and use reduction goals of Sections 502 and 503 of Executive Order 13148.

(End of clause)

54. *FAR 52.223-6 DRUG-FREE WORKPLACE (MAY 2001)

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

"Controlled substance" means a controlled substance in schedules I through V of section 202 of the Controlled Substances Act (21 U.S.C. 812) and as further defined in regulation at 21 CFR 1308.11 - 1308.15.

"Conviction" means a finding of guilt (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to determine violations of the Federal or State criminal drug statutes.

"Criminal drug statute" means a Federal or non-Federal criminal statute involving the manufacture, distribution, dispensing, possession or use of any controlled substance.

"Drug-free workplace" means the site(s) for the performance of work done by the Contractor in connection with a specific contract where employees of the Contractor are prohibited from engaging in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance.

"Employee" means an employee of a Contractor directly engaged in the performance of work under a Government contract. "Directly engaged" is defined to include all direct cost employees and any other Contractor employee who has other than a minimal impact or involvement in contract performance.

"Individual" means an offeror/contractor that has no more than one employee including the offeror/contractor.

(b) The Contractor, if other than an individual, shall--within 30 days after award (unless a longer period is agreed to in writing for contracts of 30 days or more performance duration), or as soon as possible for contracts of less than 30 days performance duration--

- (1) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition;

- (2) Establish an ongoing drug-free awareness program to inform such employees about--
 - (i) The dangers of drug abuse in the workplace;
 - (ii) The Contractor's policy of maintaining a drug-free workplace;
 - (iii) Any available drug counseling, rehabilitation, and employee assistance programs; and
 - (iv) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace.
- (3) Provide all employees engaged in performance of the contract with a copy of the statement required by subparagraph (b)(1) of this clause;
- (4) Notify such employees in writing in the statement required by subparagraph (b)(1) of this clause that, as a condition of continued employment on this contract, the employee will--
 - (i) Abide by the terms of the statement; and
 - (ii) Notify the employer in writing of the employee's conviction under a criminal drug statute for a violation occurring in the workplace no later than 5 days after such conviction.
- (5) Notify the Contracting Officer in writing within 10 days after receiving notice under subdivision (b)(4)(ii) of this clause, from an employee or otherwise receiving actual notice of such conviction. The notice shall include the position title of the employee;
- (6) Within 30 days after receiving notice under subdivision (b)(4)(ii) of this clause of a conviction, take one of the following actions with respect to any employee who is convicted of a drug abuse violation occurring in the workplace:
 - (i) Taking appropriate personnel action against such employee, up to and including termination; or
 - (ii) Require such employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency; and
- (7) Make a good faith effort to maintain a drug-free workplace through implementation of subparagraphs (b)(1) through (b)(6) of this clause.
- (c) The Contractor, if an individual, agrees by award of the contract or acceptance of a purchase order, not to engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance while performing this contract.
- (d) In addition to other remedies available to the Government, the Contractor's failure to comply with the requirements of paragraph (b) or (c) of this clause may, pursuant to FAR 23.560, render the Contractor subject to suspension of contract payments, termination of the contract for default, and suspension or debarment.

55. FAR 52.223-9 ESTIMATE OF PERCENTAGE OF RECOVERED MATERIAL CONTENT FOR EPA-DESIGNATED PRODUCTS (AUG 2000) [For Contracts exceeding \$100,000. EPA Designated product (available at <http://www.epa.gov/cpg/>)]

(a) Definitions. As used in this clause—

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

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

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

- (1) Estimate the percentage of the total recovered material used in contract performance, including, if applicable, the percentage of postconsumer material content; and
- (2) Submit this estimate to the Contracting Officer.

(End of clause)

56. *FAR 52.223-14 TOXIC CHEMICAL RELEASE REPORTING (AUG 2003) [For Contracts Over \$100,000]

(a) Unless otherwise exempt, the Contractor, as owner or operator of a facility used in the performance of this contract, shall file by July 1 for the prior calendar year an annual Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023(a) and (g)), and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106). The Contractor shall file, for each facility subject to the Form R filing and reporting requirements, the annual Form R throughout the life of the contract.

(b) A Contractor-owned or -operated facility used in the performance of this contract is exempt from the requirement to file an annual Form R if—

- (1) The facility does not manufacture, process, or otherwise use any toxic chemicals listed in 40 CFR 372.65;
- (2) The facility does not have 10 or more full-time employees as specified in section 313(b)(1)(A) of EPCRA, 42 U.S.C. 11023(b)(1)(A);
- (3) The facility does not meet the reporting thresholds of toxic chemicals established under section 313(f) of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);
- (4) The facility does not fall within the following Standard Industrial Classification (SIC) codes or their corresponding North American Industry Classification System sectors:
 - (i) Major group code 10 (except 1011, 1081, and 1094.
 - (ii) Major group code 12 (except 1241).
 - (iii) Major group codes 20 through 39.
 - (iv) Industry code 4911, 4931, or 4939 (limited to facilities that combust coal and/or oil for the purpose of generating power for distribution in commerce).
 - (v) Industry code 4953 (limited to facilities regulated under the Resource Conservation and Recovery Act, Subtitle C (42 U.S.C. 6921, *et seq.*)), or 5169, or 5171, or 7389 (limited to facilities primarily engaged in solvent recovery services on a contract or fee basis); or
- (5) The facility is not located in the United States or its outlying areas.

(c) If the Contractor has certified to an exemption in accordance with one or more of the criteria in paragraph (b) of this clause, and after award of the contract circumstances change so that any of its owned or operated facilities used in the performance of this contract is no longer exempt—

- (1) The Contractor shall notify the Contracting Officer; and
- (2) The Contractor, as owner or operator of a facility used in the performance of this contract that is no longer exempt, shall—
 - (i) Submit a Toxic Chemical Release Inventory Form (Form R) on or before July 1 for the prior calendar year during which the facility becomes eligible; and
 - (ii) Continue to file the annual Form R for the life of the contract for such facility.

(d) The Contracting Officer may terminate this contract or take other action as appropriate, if the Contractor fails to comply accurately and fully with the EPCRA and PPA toxic chemical release filing and reporting requirements.

(e) Except for acquisitions of commercial items as defined in FAR Part 2, the Contractor shall—

- (1) For competitive subcontracts expected to exceed \$100,000 (including all options), include a solicitation provision substantially the same as the provision at FAR 52.223-13, Certification of Toxic Chemical Release Reporting; and
 - (2) Include in any resultant subcontract exceeding \$100,000 (including all options), the substance of this clause, except this paragraph (e).
- (End of clause)

57. RESERVED

58. DFARS 252.223-7006 PROHIBITION ON STORAGE AND DISPOSAL OF TOXIC AND HAZARDOUS MATERIALS (APR 1993)

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

(1) "Storage" means a non-transitory, semi-permanent or permanent holding, placement, or leaving of material. It does not include a temporary accumulation of a limited quantity of a material used in or a waste generated or resulting from authorized activities, such as servicing, maintenance, or repair of Department of Defense (DoD) items, equipment, or facilities.

(2) "Toxic or hazardous materials" means:

(i) Materials referred to in section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (42 U.S.C. 9601(14)) and materials designated under section 102 of CERCLA (42 U.S.C. 9602) (40 CFR Part 302);

(ii) Materials that are of an explosive, flammable, or pyrotechnic nature; or

(iii) Materials otherwise identified by the Secretary of Defense as specified in DoD regulations.

(b) In accordance with 10 U.S.C. 2692, the Contractor is prohibited from storing or disposing of non-DoD-owned toxic or hazardous materials on a DoD installation, except to the extent authorized by a statutory exception to 10 U.S.C. 2692 or as authorized by the Secretary of Defense or his designee.

59. *FAR 52.225-9 BUY AMERICAN ACT—CONSTRUCTION MATERIALS (JUNE 2003) (For Contracts less than \$6.481 million)

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

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

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

“Cost of components” means—

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

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

“Domestic construction material” means—

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

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

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

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

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

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

[Contracting Officer to list applicable excepted materials or indicate “none”]

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

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

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

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

(c) *Request for determination of inapplicability of the Buy American Act.* (1)(i) Any Contractor request to use foreign construction material in accordance with paragraph (b)(3) of this clause shall include adequate information for Government evaluation of the request, including—

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

(B) Unit of measure;

(C) Quantity;

(D) Price;

(E) Time of delivery or availability;

(F) Location of the construction project;

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

(H) A detailed justification of the reason for use of foreign construction

materials cited in accordance with paragraph (b)(3) of this clause.

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

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

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

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

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

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

FOREIGN AND DOMESTIC CONSTRUCTION MATERIALS PRICE COMPARISON			
Construction Material Description	Unit of Measure	Quantity	Price (Dollars)*
Item 1:			
Foreign construction material			
Domestic construction material	_____	_____	_____
Item 2:			
Foreign construction material			
Domestic construction material			

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

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

60. *FAR 52.225-10 NOTICE OF BUY AMERICAN ACT REQUIREMENT—CONSTRUCTION MATERIALS (MAY 2002) (Applicable with FAR 52.225-9)

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

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

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

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

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

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

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

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

(End of provision)

61. *FAR 52.225-11 BUY AMERICAN ACT—CONSTRUCTION MATERIALS UNDER TRADE AGREEMENTS (JUNE 2004) [For Contracts more than \$6,481,000] ALTERNATE I (JAN 2004) [For Contracts between \$6.481 and 7.304733 Million]

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

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

“Construction material” means an article, material, or supply brought to the construction site by the Contractor or 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 end product.

“Designated country” means any of the following countries:

Aruba	Kiribati
Austria	Korea, Republic of
Bangladesh	Latvia
Belgium	Lesotho
Benin	Liechtenstein
Bhutan	Lithuania
Botswana	Luxembourg
Burkina Faso	Malawi
Burundi	Maldives
Canada	Mali
Cape Verde	Malta
Central African Republic	Mozambique
Chad	Nepal
Comoros	Netherlands
Cyprus	Niger
Czech Republic	Norway
Denmark	Poland
Djibouti	Portugal
Equatorial Guinea	Rwanda
Estonia	Sao Tome and Principe
Finland	Sierra Leone
France	Singapore
Gambia	Slovak Republic
Germany	Slovenia
Greece	Somalia
Guinea	Spain
Guinea-Bissau	Sweden
Haiti	Switzerland
Hong Kong	Tanzania U.R.
Hungary	Togo
	Tuvalu

Iceland	Uganda
Ireland	United Kingdom
Israel	Vanuatu
Italy	Western Samoa
Japan	Yemen

“Designated country construction material” means a construction material that—

- (1) Is wholly the growth, product, or manufacture of a designated country; or
- (2) In the case of a construction material that consists in whole or in part of materials from another country, has been substantially transformed in a designated country into a new and different construction material distinct from the materials from which it was transformed.

“Domestic construction material” means—

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

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

“Free Trade Agreement country” means Canada, Chile, Mexico, or Singapore.

“Free Trade Agreement country construction material” means a construction material that—

- (1) Is wholly the growth, product, or manufacture of a Free Trade Agreement (FTA) country; or
- (2) In the case of a construction material that consists in whole or in part of materials from another country, has been substantially transformed in a FTA country into a new and different construction material distinct from the materials from which it was transformed.

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

(b) *Construction materials.* (1) This clause implements the Buy American Act (41 U.S.C. 10a–10d) by providing a preference for domestic construction material. In addition, the Contracting Officer has determined that the Trade Agreements Act and Free Trade Agreements (FTAs) apply to this acquisition. Therefore, the Buy American Act restrictions are waived for designated country and FTA country construction materials.

(2) The Contractor shall use only domestic, designated country, or FTA country construction material in performing this contract, except as provided in paragraphs (b)(3) and (b)(4) of this clause.

(3) The requirement in paragraph (b)(2) of this clause does not apply to the construction materials or components listed by the Government as follows:

[*Contracting Officer to list applicable excepted materials or indicate “none”*]

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

- (i) The cost of domestic construction material would be unreasonable. The cost of a particular domestic construction material subject to the restrictions of the Buy American Act is unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent;
- (ii) The application of the restriction of the Buy American Act to a particular construction material would be impracticable or inconsistent with the public interest; or
- (iii) The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.

(c) *Request for determination of inapplicability of the Buy American Act.* (1)(i) Any Contractor request to use foreign construction material in accordance with paragraph (b)(4) of this clause shall include adequate information for Government evaluation of the request, including—

- (A) A description of the foreign and domestic construction materials;
- (B) Unit of measure;
- (C) Quantity;
- (D) Price;
- (E) Time of delivery or availability;

- (F) Location of the construction project;
- (G) Name and address of the proposed supplier; and
- (H) A detailed justification of the reason for use of foreign construction

materials cited in accordance with paragraph (b)(3) of this clause.

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

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

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

(2) If the Government determines after contract award that an exception to the Buy American Act applies and the Contracting Officer and the Contractor negotiate adequate consideration, the Contracting Officer will modify the contract to allow use of the foreign construction material. However, when the basis for the exception is the unreasonable price of a domestic construction material, adequate consideration is not less than the differential established in paragraph (b)(4)(i) of this clause.

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

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

FOREIGN AND DOMESTIC CONSTRUCTION MATERIALS PRICE COMPARISON			
Construction Material Description	Unit of Measure	Quantity	Price (Dollars)*
Item 1:			
Foreign construction material			
Domestic construction material	_____	_____	_____
Item 2:			
Foreign construction material			
Domestic construction material			

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

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

(e) United States law will apply to resolve any claim of breach of this contract.

(End of clause)

Alternate I (Jan 2004). As prescribed in 25.1102(c)(3), delete the definitions of “Free Trade Agreement country” and “Free Trade Agreement country construction material” from the definitions in paragraph (a) of the basic clause, add the following definition of “Chilean construction material” to paragraph (a) of the basic clause, and substitute the following paragraphs (b)(1) and (b)(2) for paragraphs (b)(1) and (b)(2) of the basic clause:

“*Chilean construction material*” means a construction material that—

- (1) Is wholly the growth, product, or manufacture of Chile; or
- (2) In the case of a construction material that consists in whole or in part of materials from another

country, has been substantially transformed in Chile into a new and different construction material distinct from the materials from which it was transformed.

(b) *Construction materials.* (1) This clause implements the Buy American Act (41 U.S.C. 10a–10d) by providing a preference for domestic construction material. In addition, the Contracting Officer has determined that the Trade Agreements Act, the Chile Free Trade Agreement, and the Singapore Free Trade Agreement apply to this acquisition. Therefore, the Buy American Act restrictions are waived for designated country and Chilean construction materials.

(2) The Contractor shall use only domestic, designated country, or Chilean construction material in performing this contract, except as provided in paragraphs (b)(3) and (b)(4) of this clause.

62. *FAR 52.225-12 NOTICE OF BUY AMERICAN ACT REQUIREMENT—CONSTRUCTION MATERIALS UNDER TRADE AGREEMENTS (JAN 2004) [Applicable with FAR 52.225-11] ALTERNATE II (JAN 2004) [For Contracts Between 6.481 and 7.344733 Million]

(a) *Definitions.* “Construction material,” “designated country construction material,” “domestic construction material,” “foreign construction material,” and “FTA country construction material,” as used in this provision, are defined in the clause of this solicitation entitled “Buy American Act—Construction Materials under Trade Agreements” (Federal Acquisition Regulation (FAR) clause 52.225-11).

(b) *Requests for determination of inapplicability.* An offeror requesting a determination regarding the inapplicability of the Buy American Act should submit the request to the Contracting Officer in time to allow a determination before submission of offers. The offeror shall include the information and applicable supporting data required by paragraphs (c) and (d) of FAR clause 52.225-11 in the request. If an offeror has not requested a determination regarding the inapplicability of the Buy American Act before submitting its offer, or has not received a response to a previous request, the offeror shall include the information and supporting data in the offer.

(c) *Evaluation of offers.* (1) The Government will evaluate an offer requesting exception to the requirements of the Buy American Act, based on claimed unreasonable cost of domestic construction materials, by adding to the offered price the appropriate percentage of the cost of such foreign construction material, as specified in paragraph (b)(4)(i) of FAR clause 52.225-11.

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

(d) *Alternate offers.* (1) When an offer includes foreign construction material, other than designated country or FTA country construction material, that is not listed by the Government in this solicitation in paragraph (b)(3) of FAR clause 52.225-11, the offeror also may submit an alternate offer based on use of equivalent domestic, designated country, or FTA country construction material.

(2) If an alternate offer is submitted, the offeror shall submit a separate Standard Form 1442 for the alternate offer, and a separate price comparison table prepared in accordance with paragraphs (c) and (d) of FAR clause 52.225-11 for the offer that is based on the use of any foreign construction material for which the Government has not yet determined an exception applies.

(3) If the Government determines that a particular exception requested in accordance with paragraph (c) of FAR clause 52.225-11 does not apply, the Government will evaluate only those offers based on use of the equivalent domestic, designated country, or FTA country construction material, and the offeror shall be required to furnish such domestic, designated country, or FTA country construction material. An offer based on use of the foreign construction material for which an exception was requested—

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

(End of provision)

ALTERNATE II (JAN 2004) [For Contracts between 6.481 and 7.304733 Million]

As prescribed in 25.1102(d)(3), substitute the following paragraphs (a) and (d) for paragraphs (a) and (d) of the basic provision:

(a) *Definitions.* *Chilean construction material, construction material, designated country construction material, domestic construction material, and foreign construction material,* as used in this provision, are defined in the clause of this solicitation entitled “Buy American Act—Construction Materials Under Trade Agreements” (Federal Acquisition Regulation (FAR) clause 52.225–11).

(d) *Alternate offers.* (1) When an offer includes foreign construction material, other than designated country or Chilean construction material, that is not listed by the Government in this solicitation in paragraph (b)(3) of FAR clause 52.225–11, the offeror also may submit an alternate offer based on use of equivalent domestic, designated country, or Chilean construction material.

(2) If an alternate offer is submitted, the offeror shall submit a separate Standard Form 1442 for the alternate offer, and a separate price comparison table prepared in accordance with paragraphs (c) and (d) of FAR clause 52.225–11 for the offer that is based on the use of any foreign construction material for which the Government has not yet determined an exception applies.

(3) If the Government determines that a particular exception requested in accordance with paragraph (c) of FAR clause 52.225–11 does not apply, the Government will evaluate only those offers based on use of the equivalent domestic, designated country, or Chilean construction material, and the offeror shall be required to furnish such domestic, designated country, or Chilean construction material. An offer based on use of the foreign construction material for which an exception was requested—

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

63. *FAR 52.225-13 RESTRICTIONS ON CERTAIN FOREIGN PURCHASES (DEC 2003)

(a) 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.

(b) Except as authorized by OFAC, most transactions involving Cuba, Iran, Libya, and Sudan are prohibited, as are most imports from North Korea, into the United States or its outlying areas. Lists of entities and individuals subject to economic sanctions are included in OFAC’s List of Specially Designated Nationals and Blocked Persons at <http://www.epls.gov/TerList1.html>. More information about these restrictions, as well as updates, is available in the OFAC’s regulations at 31 CFR chapter V and/or on OFAC’s website at <http://www.treas.gov/ofac>.

(c) The Contractor shall insert this clause, including this paragraph (c), in all subcontracts.
(End of clause)

64. DFARS 252.226-7001 UTILIZATION OF INDIAN ORGANIZATIONS, INDIAN-OWNED ECONOMIC ENTERPRISES, AND NATIVE HAWAIIAN SMALL BUSINESS CONCERNS (OCT 2003)

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

"Indian" means any person who is a member of any Indian tribe, band, group, pueblo, or community that is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs (BIA) in accordance with 25 U.S.C. 1452(c) and any "Native" as defined in the Alaska Native Claims Settlement Act (43 U.S.C. 1601).

"Indian organization" means the governing body of any Indian tribe or entity established or recognized by the governing body of an Indian tribe for the purposes of 25 U.S.C. Chapter 17.

"Indian-owned economic enterprise" means any Indian-owned (as determined by the Secretary of the Interior) commercial, industrial, or business activity established or organized for the purpose of profit, provided that Indian ownership constitutes not less than 51 percent of the enterprise.

"Indian tribe" means any Indian tribe, band, group, pueblo, or community, including native villages and native groups (including corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, that is recognized by the Federal Government as eligible for services from BIA in accordance with 25 U.S.C. 1452(c).

"Interested party" means a contractor or an actual or prospective offeror whose direct economic interest would be affected by the award of a subcontract or by the failure to award a subcontract.

"Native Hawaiian small business concern" means an entity that is-

(1) A small business concern as defined in Section 3 of the Small Business Act (15 U.S.C. 632) and relevant implementing regulations; and

(2) Owned and controlled by a Native Hawaiian as defined in 25 U.S.C. 4221(9).

(b) The Contractor shall use its best efforts to give Indian organizations, Indian-owned economic enterprises, and Native Hawaiian small business concerns the maximum practicable opportunity to participate in the subcontracts it awards, to the fullest extent consistent with efficient performance of the contract.

(c) The Contracting Officer and the Contractor, acting in good faith, may rely on the representation of an Indian organization, Indian-owned economic enterprise, or Native Hawaiian small business concern as to its eligibility, unless an interested party challenges its status or the Contracting Officer has independent reason to question that status.

(d) In the event of a challenge to the representation of a subcontractor, the Contracting Officer will refer the matter to-

(1) For matters relating to Indian organizations or Indian-owned economic enterprises:

U.S. Department of the Interior
Bureau of Indian Affairs
Attn: Chief, Division of Contracting and
Grants Administration
1849 C Street NW, MS-2626-MIB
Washington, DC 20240-4000.

The BIA will determine the eligibility and will notify the Contracting Officer.

(2) For matters relating to Native Hawaiian small business concerns:

Department of Hawaiian Home Lands
PO Box 1879
Honolulu, HI 96805.

The Department of Hawaiian Home Lands will determine the eligibility and will notify the Contracting Officer.

(e) No incentive payment will be made-

(1) While a challenge is pending; or

(2) If a subcontractor is determined to be an ineligible participant.

(f)(1) The Contractor, on its own behalf or on behalf of a subcontractor at any tier, may request an incentive payment in accordance with this clause.

(2) The incentive amount that may be requested is 5 percent of the estimated cost, target cost, or fixed price included in the subcontract at the time of award to the Indian organization, Indian-owned economic enterprise, or Native Hawaiian small business concern.

(3) In the case of a subcontract for commercial items, the Contractor may receive an incentive payment only if the subcontracted items are produced or manufactured in whole or in part by an Indian organization,

Indian-owned economic enterprise, or Native Hawaiian small business concern.

(4) The Contractor has the burden of proving the amount claimed and shall assert its request for an incentive payment prior to completion of contract performance.

(5) The Contracting Officer, subject to the terms and conditions of the contract and the availability of funds, will authorize an incentive payment of 5 percent of the estimated cost, target cost, or fixed price included in the subcontract awarded to the Indian organization, Indian-owned economic enterprise, or Native Hawaiian small business concern.

(6) If the Contractor requests and receives an incentive payment on behalf of a subcontractor, the Contractor is obligated to pay the subcontractor the incentive amount.

(g) The Contractor shall insert the substance of this clause, including this paragraph (g), in all subcontracts exceeding \$500,000 for which further subcontracting opportunities may exist.
(End of clause)

65. *FAR 52.227-1 AUTHORIZATION AND CONSENT (JUL 1995)

(a) The Government authorizes and consents to all use and manufacture, in performing this contract or any subcontract at any tier, of any invention described in and covered by a United States patent

(1) embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract or

(2) used in machinery, tools, or methods whose use necessarily results from compliance by the Contractor or a subcontractor with

(i) specifications or written provisions forming a part of this contract or

(ii) specific written instructions given by the Contracting Officer directing the manner of performance. The entire liability to the Government for infringement of a patent of the United States shall be determined solely by the provisions of the indemnity clause, if any, included in this contract or any subcontract hereunder (including any lower-tier subcontract), and the Government assumes liability for all other infringement to the extent of the authorization and consent hereinabove granted.

(b) The Contractor agrees to include, and require inclusion of, this clause, suitably modified to identify the parties, in all subcontracts at any tier for supplies or services (including construction, architect-engineer services, and materials, supplies, models, samples, and design or testing services expected to exceed the simplified acquisition threshold) however, omission of this clause from any subcontract, including those at or below the simplified acquisition threshold, does not affect this authorization and consent.

66. *FAR 52.227-2 NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (AUG 1996)

(a) The Contractor shall report to the Contracting Officer, promptly and in reasonable written detail, each notice or claim of patent or copy-right infringement based on the performance of this contract of which the Contractor has knowledge.

(b) In the event of any claim or suit against the Government on account of any alleged patent or copyright infringement arising out of the performance of this contract or out of the use of any supplies furnished or work or services performed under this contract, the Contractor shall furnish to the Government, when requested by the Contracting Officer, all evidence and information in possession of the Contractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except where the Contractor has agreed to indemnify the Government.

(c) The Contractor agrees to include, and require inclusion of, this clause in all subcontracts at any tier for supplies or services (including construction and architect-engineer subcontracts and those for material, supplies, models, samples, or design or testing services) expected to exceed the simplified acquisition threshold at FAR 2.101.

67. *FAR 52.227-4 PATENT INDEMNITY--CONSTRUCTION CONTRACTS (APR 1984)

Except as otherwise provided, the Contractor agrees to indemnify the Government and its officers, agents, and employees against liability, including costs and expenses, for infringement upon any United States patent (except a patent issued upon an application that is now or may hereafter be withheld from issue pursuant to a Secrecy Order under 35 U.S.C. 181) arising out of performing this contract or out of the use or disposal by or for the account of the Government of supplies furnished or work performed under this contract.

68. DFARS 252.227-7033 RIGHTS IN SHOP DRAWINGS (APR 1966)

(a) Shop drawings for construction means drawings, submitted to the Government by the Construction Contractor, subcontractor or any lower-tier subcontractor pursuant to a construction contract, showing in detail

(i) the proposed fabrication and assembly of structural elements and (ii) the installation (i.e., form, fit, and attachment details) of materials or equipment. The Government may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.

(b) This clause, including this paragraph (b), shall be included in all subcontracts hereunder at any tier.

69. FAR 52.228-1 BID GUARANTEE (SEP 1996) [NOTE: Not required for projects less than \$100,000]

(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 bids.

(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 twenty (20%) of the bid price or Three Million Dollars (\$3,000,000), 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.

70. *FAR 52.228-2 ADDITIONAL BOND SECURITY (OCT 1997)

The Contractor shall promptly furnish additional security required to protect the Government and persons supplying labor or materials under this contract if--

(a) Any surety upon any bond, or issuing financial institution for other security, furnished with this contract becomes unacceptable to the Government;

(b) Any surety fails to furnish reports on its financial condition as required by the Government;

(c) The contract price is increased so that the penal sum of any bond becomes inadequate in the opinion of the Contracting Officer; or

(d) An irrevocable letter of credit (ILC) used as security will expire before the end of the period of required security. If the Contractor does not furnish an acceptable extension or replacement ILC, or other acceptable substitute, at least 30 days before an ILC's scheduled expiration, the Contracting Officer has the right to immediately draw on the ILC.

71. *FAR 52.228-5 INSURANCE--WORK ON A GOVERNMENT INSTALLATION (JAN 1997) [For Contracts Exceeding \$100,000]

(a) The Contractor shall, at its own expense, provide and maintain during the entire performance of this contract, at least the kinds and minimum amounts of insurance required in the Schedule or elsewhere in the contract.

(b) Before commencing work under this contract, the Contractor shall notify 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.

72. *FAR 52.228-11 PLEDGES OF ASSETS (FEB 1992)

(a) Offerors shall obtain from each person acting as an individual surety on a bid guarantee, a performance bond, or a payment bond--

- (1) Pledge of assets; and
- (2) Standard Form 28, Affidavit of Individual Surety.

(b) Pledges of assets from each person acting as an individual surety shall be in the form of--

(1) Evidence of an escrow account containing cash, certificates of deposit, commercial or Government securities, or other assets described in FAR 28.203-2 (except see 28.203-2(b)(2) with respect to Government securities held in book entry form) and/or;

(2) A recorded lien on real estate. The offeror will be required to provide--
(i) Evidence of title in the form of a certificate of title prepared by a title insurance company approved by the United States Department of Justice. This title evidence must show fee simple title vested in the surety along with any concurrent owners; whether any real estate taxes are due and payable; and any recorded encumbrances against the property, including the lien filed in favor of the Government as required by FAR 28.203-3(d);

(ii) Evidence of the amount due under any encumbrance shown in the evidence of title;

(iii) A copy of the current real estate tax assessment of the property or a current appraisal dated no earlier than 6 months prior to the date of the bond, prepared by a professional appraiser who certifies that the appraisal has been conducted in accordance with the generally accepted appraisal standards as reflected in the Uniform Standards of Professional Appraisal Practice, as promulgated by the Appraisal Foundation.

73. *FAR 52.228-12 PROSPECTIVE SUBCONTRACTOR REQUESTS FOR BONDS (OCT 1995)

In accordance with Section 806(a)(3) of Public Law 102-190, as amended by Sections 2091 and 8105 of Pub. L. 103-355, upon the request of a prospective subcontractor or supplier offering to furnish labor or material for the performance of this contract for which a payment bond has been furnished to the Government pursuant to the Miller Act, the Contractor shall promptly provide a copy of such payment bond to the requestor.

74. FAR 52.228-13 ALTERNATIVE PAYMENT PROTECTIONS (JULY 2000) [Applicable only for projects or delivery orders less than \$100,000]

- (a) The Contractor shall submit one of the following payment protections:
 - (1) A payment bond.
 - (2) An irrevocable letter of credit from a federally insured financial institution.
- (b) The amount of the payment protection shall be 100 percent of the contract price.
- (c) The submission of the payment protection is required within 10 days of contract award.
- (d) The payment protection shall provide protection for the full contract performance period plus a one-year period.
- (e) Except for escrow agreements and payment bonds, which provide their own protection procedures, the Contracting Officer is authorized to access funds under the payment protection when it has been alleged in writing by a supplier of labor or material that a nonpayment has occurred, and to withhold funds pending resolution by administrative or judicial proceedings or mutual agreement of the parties.
- (f) When a tripartite escrow agreement is used, the Contractor shall utilize only suppliers of labor and material that signed the escrow agreement.

75. FAR 52.228-14 IRREVOCABLE LETTER OF CREDIT (DEC 1999)

(a) "Irrevocable letter of credit" (ILC), as used in this clause, means a written commitment by a federally insured financial institution to pay all or part of a stated amount of money, until the expiration date of the letter, upon presentation by the Government (the beneficiary) of a written demand therefor. Neither the financial institution nor the offeror/Contractor can revoke or condition the letter of credit.

(b) If the offeror intends to use an ILC in lieu of a bid bond, or to secure other types of bonds such as performance and payment bonds, the letter of credit and letter of confirmation formats in paragraphs (e) and (f) of this clause shall be used.

(c) The letter of credit shall be irrevocable, shall require presentation of no document other than a written demand and the ILC (including confirming letter, if any), shall be issued/confirmed by an acceptable federally insured financial institution as provided in paragraph (d) of this clause, and--

(1) If used as a bid guarantee, the ILC shall expire no earlier than 60 days after the close of the bid acceptance period;

(2) If used as an alternative to corporate or individual sureties as security for a performance or payment bond, the offeror/Contractor may submit an ILC to cover the entire period of performance or may submit an ILC with an initial expiration date estimated to cover the entire period for which financial security is required or may submit an ILC with an initial expiration that is a minimum period of one year from the date of issuance. The ILC shall provide that, unless the issuer provides the beneficiary written notice of non-renewal of least 60 days in advance of the current expiration date, the ILC is automatically extended without amendment for one year from the expiration date, or any future expiration date, until the period of required coverage is completed and the Contracting Officer provides the financial institution with a written statement waiving the right to payment. The period of required coverage shall be:

- (i) For contracts subject to the Miller Act, the later of--
 - (A) One year following the expected date of final payment;
 - (B) For performance bonds only, until completion of any warranty period; or
 - (C) For payment bonds only, until resolution of all claims filed against the payment bond during the one-year period following final payment.
- (ii) For contracts not subject to the Miller Act, the later of--

(A) 90 days following final payment; or

(B) For performance bonds only, until completion of any warranty period.

(d) Only federally insured financial institution rated investment grade or higher shall issue or confirm the ILC. The offeror/Contractor shall provide the Contracting Officer a credit rating that indicates the financial institution has the required rating(s) as of the date of issuance of the ILC. Unless the financial institution issuing the ILC had letter of credit business of at least \$25 million in the past year, ILCs over \$5 million must be confirmed by another acceptable financial institution that had letter of credit business of at least \$25 million in the past year.

(e) The following format shall be used by the issuing financial institution to create an ILC:

[Issuing Financial Institution's Letterhead or Name and Address]

Issue Date-----

Irrevocable Letter of Credit No.-----

Account party's name-----

Account party's address-----

For Solicitation No.-----

(For reference only)

TO: [U.S. Government agency]

[U.S. Government agency's address]

1. We hereby establish this irrevocable and transferable Letter of Credit in your favor for one or more drawings up to United States \$ _____. This Letter of Credit is payable at [issuing financial institution's and, if any, confirming financial institution's] office at [issuing financial institution's address and, if any, confirming financial institution's address] and expires with our close of business on _____, or any automatically extended expiration date.

2. We hereby undertake to honor your or transferee's sight draft(s) drawn on issuing or, if any, the confirming financial institution, for all or any part of this credit if presented with this Letter of Credit and confirmation, if any, at the office specified in paragraph 1 of this Letter of Credit on or before the expiration date or any automatically extended expiration date.

3. [This paragraph is omitted if used as a bid guarantee, and subsequent paragraphs are renumbered.] It is a condition of this Letter of Credit that it is deemed to be automatically extended without amendment for one year from the expiration date hereof, or any future expiration date, unless at least 60 days prior to any expiration date, we notify you or the transferee by registered mail, or other receipted means of delivery, that we elect not to consider this Letter of Credit renewed for any such additional period. At the time we notify you, we also agree to notify the account party (and confirming financial institution, if any) by the same means of delivery.

4. This Letter of Credit is transferable. Transfers and assignments of proceeds are to be effected without charge to either the beneficiary or the transferee/assignee of proceeds. Such transfer or assignment shall be only at the written direction of the Government (the beneficiary) in a form satisfactory to the issuing financial institution and the confirming financial institution, if any.

5. This Letter of Credit is subject to the Uniform Customs and Practice (UCP) for Documentary Credits, 1993 Revision, International Chamber of Commerce Publication No. 500, and to the extent not inconsistent therewith, to the laws of _____ [state of confirming financial institution, if any, otherwise state of issuing financial institution].

6. If this credit expires during an interruption of business of this financial institution as described in Article 17 of the UCP, the financial institution specifically agrees to effect payment if this credit is drawn against within 30 days after the resumption of our business.

Sincerely,

[Issuing financial institution]

(f) The following format shall be used by the financial institution to confirm an ILC:

[Confirming Financial Institution's Letterhead or Name and Address]---

(Date) _____

Our Letter of Credit

Advice Number-----

Beneficiary:-----

[U.S. Government agency]

Issuing Financial Institution:-----

Issuing Financial Institution's LC No.:-----

Gentlemen:

1. We hereby confirm the above indicated Letter of Credit, the original of which is attached, issued by _____ [name of issuing financial institution] for drawings of up to United States dollars _____/U.S. \$ _____ and expiring with our close of business on _____ [the expiration date], or any automatically extended expiration date.

2. Draft(s) drawn under the Letter of Credit and this Confirmation are payable at our office located at _____.

3. We hereby undertake to honor sight draft(s) drawn under and presented with the Letter of Credit and this Confirmation at our offices as specified herein.

4. [This paragraph is omitted if used as a bid guarantee, and subsequent paragraphs are renumbered.] It is a condition of this confirmation that it be deemed automatically extended without amendment for one year from the expiration date hereof, or any automatically extended expiration date, unless:

(a) At least 60 days prior to any such expiration date, we shall notify the Contracting Officer, or the transferee and the issuing financial institution, by registered mail or other receipted means of delivery, that we elect not to consider this confirmation extended for any such additional period; or

(b) The issuing financial institution shall have exercised its right to notify you or the transferee, the account party, and ourselves, of its election not to extend the expiration date of the Letter of Credit.

5. This confirmation is subject to the Uniform Customs and Practice (UCP) for Documentary Credits, 1993 Revision, International Chamber of Commerce Publication No. 500, and to the extent not inconsistent therewith, to the laws of _____ [state of confirming financial institution].

6. If this confirmation expires during an interruption of business of this financial institution as described in Article 17 of the UCP, we specifically agree to effect payment if this credit is drawn against within 30 days after the resumption of our business.

Sincerely,

[Confirming financial institution]

(g) The following format shall be used by the Contracting Officer for a sight draft to draw on the Letter of Credit:
SIGHT DRAFT

[City, State]

(Date) _____

[Name and address of financial institution]

Pay to the order of-----

[Beneficiary Agency] _____

the sum of United States \$ _____

This draft is drawn under-----

Irrevocable Letter of Credit No.-----

[Beneficiary Agency]

By: _____

76. FAR 52.228-15 PERFORMANCE AND PAYMENT BONDS (JULY 2000).

[This provision is Not Required for projects less than \$100,000. See Clauses "Alternate Payment Protections" and "Inapplicable Provisions and Clauses".]

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

“Original contract price” means the award price of the contract; or, for requirements contracts, the price payable for the estimated total quantity; or, for indefinite-quantity contracts, the price payable for the specified minimum quantity. Original contract price does not include the price of any options, except those options exercised at the time of contract award.

(b) *Amount of required bonds.* Unless the resulting contract price is \$100,000 or less, the successful offeror shall furnish performance and payment bonds to the Contracting Officer as follows:

(1) *Performance bonds (Standard Form 25).* The penal amount of performance bonds at the time of contract award shall be 100 percent of the original contract price.

(2) *Payment Bonds (Standard Form 25-A).* The penal amount of payment bonds at the time of contract award shall be 100 percent of the original contract price.

(3) *Additional bond protection.* (i) The Government may require additional performance and payment bond protection if the contract price is increased. The increase in protection generally will equal 100 percent of the increase in contract price.

(ii) The Government may secure the additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

(c) *Furnishing executed bonds.* The Contractor shall furnish all executed bonds, including any necessary reinsurance agreements, to the Contracting Officer, within the time period specified in the Bid Guarantee provision of the solicitation, or otherwise specified by the Contracting Officer, but in any event, before starting work.

(d) *Surety or other security for bonds.* The bonds shall be in the form of firm commitment, supported by corporate sureties whose names appear on the list contained in Treasury Department Circular 570, individual sureties, or by other acceptable security such as postal money order, certified check, cashier’s check, irrevocable letter of credit, or, in accordance with Treasury Department regulations, certain bonds or notes of the United States. Treasury Circular 570 is published in the Federal Register or may be obtained from the:

U.S. Department of Treasury
Financial Management Service
Surety Bond Branch
401 14th Street, NW, 2nd Floor, West Wing
Washington, DC 20227.

(e) *Notice of subcontractor waiver of protection (40 U.S.C. 270b(c)).* Any waiver of the right to sue on the payment bond is void unless it is in writing, signed by the person whose right is waived, and executed after such person has first furnished labor or material for use in the performance of the contract.

(End of clause)

77. FAR 52.229-3 FEDERAL, STATE, AND LOCAL TAXES (APR 2003) [For Contracts Exceeding \$100,000]

(a) As used in this clause--

"All applicable Federal, State, and local taxes and duties," means all taxes and duties, in effect on the contract date, that the taxing authority is imposing and collecting on the transactions or property covered by this contract.

"After-imposed Federal tax," as used in this clause, means any new or increased Federal excise tax or duty, or tax that was exempted or excluded on the contract date but whose exemption was later revoked or reduced during the contract period, on the transactions or property covered by this contract that the Contractor is required to pay or bear as the result of legislative, judicial, or administrative action taking effect after the contract date. It does not include social security tax or other employment taxes.

"After-relieved Federal tax," means any amount of Federal excise tax or duty, except social security or other employment taxes, that would otherwise have been payable on the transactions or property covered by this contract, but which the Contractor is not required to pay or bear, or for which the Contractor obtains a refund or drawback, as the result of legislative, judicial, or administrative action taking effect after the contract date.

"Contract date," means the date set for bid opening or, if this is a negotiated contract or a modification, the effective date of this contract or modification.

"Local taxes" includes taxes imposed by a possession or territory of the United States, Puerto Rico, or the Northern Mariana Islands, if the contract is performed wholly or partly in any of those areas.

(b) The contract price includes all applicable Federal, State, and local taxes and duties.

(c) The contract price shall be increased by the amount of any after-imposed Federal tax, provided the Contractor warrants in writing that no amount for such newly imposed Federal excise tax or duty or rate increase was included in the contract price, as a contingency reserve or otherwise.

(d) The contract price shall be decreased by the amount of any after-relieved Federal tax.

(e) The contract price shall be decreased by the amount of any Federal excise tax or duty, except social security or other employment taxes, that the Contractor is required to pay or bear, or does not obtain a refund of, through the Contractor's fault, negligence, or failure to follow instructions of the Contracting Officer.

(f) No adjustment shall be made in the contract price under this clause unless the amount of the adjustment exceeds \$250.

(g) The Contractor shall promptly notify the Contracting Officer of all matters relating to any Federal excise tax or duty that reasonably may be expected to result in either an increase or decrease in the contract price and shall take appropriate action as the Contracting Officer directs.

(h) The Government shall, without liability, furnish evidence appropriate to establish exemption from any Federal, State, or local tax when the Contractor requests such evidence and a reasonable basis exists to sustain the exemption.

78. RESERVED

79. DFARS 252.231-7000 SUPPLEMENTAL COST PRINCIPLES (DEC 1991)

When the allowability of costs under this contract is determined in accordance with part 31 of the Federal Acquisition Regulation (FAR) allowability shall also be determined in accordance with part 231 of the DoD FAR Supplement, in effect on the date of this contract.

80. *FAR 52.232-5 PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS (SEPT 2002)

(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 8th day 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 of 1940 (31 U.S.C. 3727 and 41 U.S.C. 15).

(i) Limitation Because of Unfinalized Work. Notwithstanding any provision of this contract, progress payments shall not exceed 80 percent on work accomplished on unfinalized 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 subparagraph (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.

81. RESERVED.

82. *FAR 52.232-17 INTEREST (JUN 1996)

(a) Except as otherwise provided in this contract under a Price Reduction for Defective Cost or Pricing Data clause or a Cost Accounting Standards clause, all amounts that become payable by the Contractor to the Government under this contract (net of any applicable tax credit under the Internal Revenue Code (26 U.S.C. 1481)) shall bear simple interest from the date due until paid unless paid within 30 days of becoming due. The interest rate shall be the interest rate established by the Secretary of the Treasury as provided in Section 12 of the Contract Disputes Act of 1978 (Public Law 95-563), which is applicable to the period in which the amount becomes due, as provided in paragraph (b) of this clause, and then at the rate applicable for each six-month period as fixed by the Secretary until the amount is paid.

(b) Amounts shall be due at the earliest of the following dates:

(1) The date fixed under this contract.

(2) The date of the first written demand for payment consistent with this contract, including any demand resulting from a default termination.

(3) The date the Government transmits to the Contractor a proposed supplemental agreement to confirm completed negotiations establishing the amount of debt.

(4) If this contract provides for revision of prices, the date of written notice to the Contractor stating the amount of refund payable in connection with a pricing proposal or a negotiated pricing agreement not confirmed by contract modification.

(c) The interest charge made under this clause may be reduced under the procedures prescribed in 32.614-2 of the Federal Acquisition Regulation in effect on the date of this contract.

83. *FAR 52.232-23 ASSIGNMENT OF CLAIMS (JAN 1986)

(a) The Contractor, under the Assignment of Claims Act, as amended, 31 U.S.C. 3727, 41 U.S.C. 15 (hereafter referred to as "the Act"), may assign its rights to be paid amounts due or to become due as a result of the performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency. The assignee under such an assignment may thereafter further assign or reassign its right under the original assignment to any type of financing institution described in the preceding sentence.

(b) Any assignment or reassignment authorized under the Act and this clause shall cover all unpaid amounts payable under this contract, and shall not be made to more than one party, except that an assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in the financing of this contract.

(c) The Contractor shall not furnish or disclose to any assignee under this contract any classified document (including this contract) or information related to work under this contract until the Contracting Officer authorizes such action in writing.

84. *FAR 52.232-27 PROMPT PAY FOR CONSTRUCTION CONTRACTS (OCT 2003)

Notwithstanding any other payment terms in this contract, the Government will make invoice payments under the terms and conditions specified in this clause. The Government considers payment as being made on the day a check is dated or the date of an electronic funds transfer. Definitions of pertinent terms are set forth in sections 2.101, 32.001, and 32.902 of the Federal Acquisition Regulation. All days referred to in this clause are calendar days, unless otherwise specified. (However, see paragraph (a)(3) concerning payments due on Saturdays, Sundays, and legal holidays.)

(a) *Invoice payments*—(1) *Types of invoice payments*. For purposes of this clause, there are several types of invoice payments that may occur under this contract, as follows:

(i) Progress payments, if provided for elsewhere in this contract, based on Contracting Officer approval of the estimated amount and value of work or services performed, including payments for reaching milestones in any project.

(A) The due date for making such payments is 14 days after the designated billing office receives a proper payment request. If the designated billing office fails to annotate the payment request with the actual date of receipt at the time of receipt, the payment due date is the 14th day after the date of the Contractor's payment request, provided the designated billing office receives a proper payment request and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(B) The due date for payment of any amounts retained by the Contracting Officer in accordance with the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts, is as specified in the contract or, if not specified, 30 days after approval by the Contracting Officer for release to the Contractor.

(ii) Final payments based on completion and acceptance of all work and presentation of release of all claims against the Government arising by virtue of the contract, and payments for partial deliveries that have been accepted by the Government (*e.g.*, each separate building, public work, or other division of the contract for which the price is stated separately in the contract).

(A) The due date for making such payments is the later of the following two events:

(1) The 30th day after the designated billing office receives a proper

invoice from the Contractor.

(2) The 30th day after Government acceptance of the work or services completed by the Contractor. For a final invoice when the payment amount is subject to contract settlement actions (e.g., release of claims), acceptance is deemed to occur on the effective date of the contract settlement.

(B) If the designated billing office fails to annotate the invoice with the date of actual receipt at the time of receipt, the invoice payment due date is the 30th day after the date of the Contractor's invoice, provided the designated billing office receives a proper invoice and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(2) *Contractor's invoice.* The Contractor shall prepare and submit invoices to the designated billing office specified in the contract. A proper invoice must include the items listed in paragraphs (a)(2)(i) through (a)(2)(xi) of this clause. If the invoice does not comply with these requirements, the designated billing office must return it within 7 days after receipt, with the reasons why it is not a proper invoice. When computing any interest penalty owed the Contractor, the Government will take into account if the Government notifies the Contractor of an improper invoice in an untimely manner.

(i) Name and address of the Contractor.

(ii) Invoice date and invoice number. (The Contractor should date invoices as close as possible to the date of mailing or transmission.)

(iii) Contract number or other authorization for work or services performed (including order number and contract line item number).

(iv) Description of work or services performed.

(v) Delivery and payment terms (e.g., discount for prompt payment terms).

(vi) Name and address of Contractor official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment).

(vii) Name (where practicable), title, phone number, and mailing address of person to notify in the event of a defective invoice.

(viii) For payments described in paragraph (a)(1)(i) of this clause, substantiation of the amounts requested and certification in accordance with the requirements of the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts.

(ix) Taxpayer Identification Number (TIN). The Contractor shall include its TIN on the invoice only if required elsewhere in this contract.

(x) Electronic funds transfer (EFT) banking information.

(A) The Contractor shall include EFT banking information on the invoice only if required elsewhere in this contract.

(B) If EFT banking information is not required to be on the invoice, in order for the invoice to be a proper invoice, the Contractor shall have submitted correct EFT banking information in accordance with the applicable solicitation provision (e.g., 52.232-38, Submission of Electronic Funds Transfer Information with Offer), contract clause (e.g., 52.232-33, Payment by Electronic Funds Transfer—Central Contractor Registration, or 52.232-34, Payment by Electronic Funds Transfer—Other Than Central Contractor Registration), or applicable agency procedures.

(C) EFT banking information is not required if the Government waived the requirement to pay by EFT.

(xi) Any other information or documentation required by the contract.

(3) *Interest penalty.* The designated payment office will pay an interest penalty automatically, without request from the Contractor, if payment is not made by the due date and the conditions listed in paragraphs (a)(3)(i) through (a)(3)(iii) of this clause are met, if applicable. However, when the due date falls on a Saturday, Sunday, or legal holiday, the designated payment office may make payment on the following working day without incurring a late payment interest penalty.

(i) The designated billing office received a proper invoice.

(ii) The Government processed a receiving report or other Government documentation authorizing payment and there was no disagreement over quantity, quality, Contractor compliance with any contract term or condition, or requested progress payment amount.

(iii) In the case of a final invoice for any balance of funds due the Contractor for work or services performed, the amount was not subject to further contract settlement actions between the Government and the Contractor.

(4) *Computing penalty amount.* The Government will compute the interest penalty in accordance with the Office of Management and Budget prompt payment regulations at 5 CFR part 1315.

(i) For the sole purpose of computing an interest penalty that might be due the Contractor for payments described in paragraph (a)(1)(ii) of this clause, Government acceptance or approval is deemed to occur constructively on the 7th day after the Contractor has completed the work or services in accordance with the terms and conditions of the contract. If actual acceptance or approval occurs within the constructive acceptance or approval period, the Government will base the determination of an interest penalty on the actual date of acceptance or approval. Constructive acceptance or constructive approval requirements do not apply if there is a disagreement over quantity, quality, or Contractor compliance with a contract provision. These requirements also do not compel Government officials to accept work or services, approve Contractor estimates, perform contract administration functions, or make payment prior to fulfilling their responsibilities.

(ii) The prompt payment regulations at 5 CFR 1315.10(c) do not require the Government to pay interest penalties if payment delays are due to disagreement between the Government and the Contractor over the payment amount or other issues involving contract compliance, or on amounts temporarily withheld or retained in accordance with the terms of the contract. The Government and the Contractor shall resolve claims involving disputes, and any interest that may be payable in accordance with the clause at FAR 52.233-1, Disputes.

(5) *Discounts for prompt payment.* The designated payment office will pay an interest penalty automatically, without request from the Contractor, if the Government takes a discount for prompt payment improperly. The Government will calculate the interest penalty in accordance with the prompt payment regulations at 5 CFR part 1315.

(6) *Additional interest penalty.* (i) The designated payment office will pay a penalty amount, calculated in accordance with the prompt payment regulations at 5 CFR part 1315 in addition to the interest penalty amount only if—

(A) The Government owes an interest penalty of \$1 or more;

(B) The designated payment office does not pay the interest penalty within 10 days after the date the invoice amount is paid; and

(C) The Contractor makes a written demand to the designated payment office for additional penalty payment, in accordance with paragraph (a)(6)(ii) of this clause, postmarked not later than 40 days after the date the invoice amount is paid.

(ii)(A) The Contractor shall support written demands for additional penalty payments with the following data. The Government will not request any additional data. The Contractor shall—

(1) Specifically assert that late payment interest is due under a specific invoice, and request payment of all overdue late payment interest penalty and such additional penalty as may be required;

(2) Attach a copy of the invoice on which the unpaid late payment interest was due; and

(3) State that payment of the principal has been received, including the date of receipt.

(B) If there is no postmark or the postmark is illegible—

(1) The designated payment office that receives the demand will annotate it with the date of receipt provided the demand is received on or before the 40th day after payment was made; or

(2) If the designated payment office fails to make the required annotation, the Government will determine the demand's validity based on the date the Contractor has placed on the demand, provided such date is no later than the 40th day after payment was made.

(b) *Contract financing payments.* If this contract provides for contract financing, the Government will make contract financing payments in accordance with the applicable contract financing clause.

(c) *Subcontract clause requirements.* The Contractor shall include in each subcontract for property or services (including a material supplier) for the purpose of performing this contract the following:

(1) *Prompt payment for subcontractors.* A payment clause that obligates the Contractor to pay the subcontractor for satisfactory performance under its subcontract not later than 7 days from receipt of payment out of such amounts as are paid to the Contractor under this contract.

(2) *Interest for subcontractors.* An interest penalty clause that obligates the Contractor to pay to

the subcontractor an interest penalty for each payment not made in accordance with the payment clause—

(i) For the period beginning on the day after the required payment date and ending on the date on which payment of the amount due is made; and

(ii) Computed at the rate of interest established by the Secretary of the Treasury, and published in the **Federal Register**, for interest payments under section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty.

(3) *Subcontractor clause flowdown*. A clause requiring each subcontractor to

(i) Include a payment clause and an interest penalty clause conforming to the standards set forth in paragraphs (c)(1) and (c)(2) of this clause in each of its subcontracts; and

(ii) Require each of its subcontractors to include such clauses in their subcontracts with each lower-tier subcontractor or supplier.

(d) *Subcontract clause interpretation*. The clauses required by paragraph (c) of this clause shall not be construed to impair the right of the Contractor or a subcontractor at any tier to negotiate, and to include in their subcontract, provisions that—

(1) *Retainage permitted*. Permit the Contractor or a subcontractor to retain (without cause) a specified percentage of each progress payment otherwise due to a subcontractor for satisfactory performance under the subcontract without incurring any obligation to pay a late payment interest penalty, in accordance with terms and conditions agreed to by the parties to the subcontract, giving such recognition as the parties deem appropriate to the ability of a subcontractor to furnish a performance bond and a payment bond;

(2) *Withholding permitted*. Permit the Contractor or subcontractor to make a determination that part or all of the subcontractor's request for payment may be withheld in accordance with the subcontract agreement; and

(3) *Withholding requirements*. Permit such withholding without incurring any obligation to pay a late payment penalty if—

(i) A notice conforming to the standards of paragraph (g) of this clause previously has been furnished to the subcontractor; and

(ii) The Contractor furnishes to the Contracting Officer a copy of any notice issued by a Contractor pursuant to paragraph (d)(3)(i) of this clause.

(e) *Subcontractor withholding procedures*. If a Contractor, after making a request for payment to the Government but before making a payment to a subcontractor for the subcontractor's performance covered by the payment request, discovers that all or a portion of the payment otherwise due such subcontractor is subject to withholding from the subcontractor in accordance with the subcontract agreement, then the Contractor shall—

(1) *Subcontractor notice*. Furnish to the subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon ascertaining the cause giving rise to a withholding, but prior to the due date for subcontractor payment;

(2) *Contracting Officer notice*. Furnish to the Contracting Officer, as soon as practicable, a copy of the notice furnished to the subcontractor pursuant to paragraph (e)(1) of this clause;

(3) *Subcontractor progress payment reduction*. Reduce the subcontractor's progress payment by an amount not to exceed the amount specified in the notice of withholding furnished under paragraph (e)(1) of this clause;

(4) *Subsequent subcontractor payment*. Pay the subcontractor as soon as practicable after the correction of the identified subcontract performance deficiency, and—

(i) Make such payment within—

(A) Seven days after correction of the identified subcontract performance deficiency (unless the funds therefor must be recovered from the Government because of a reduction under paragraph (e)(5)(i) of this clause; or

(B) Seven days after the Contractor recovers such funds from the Government;

or

(ii) Incur an obligation to pay a late payment interest penalty computed at the rate of interest established by the Secretary of the Treasury, and published in the **Federal Register**, for interest payments under section 12 of the Contracts Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty;

(5) *Notice to Contracting Officer*. Notify the Contracting Officer upon—

(i) Reduction of the amount of any subsequent certified application for payment; or

(ii) Payment to the subcontractor of any withheld amounts of a progress payment, specifying—

(A) The amounts withheld under paragraph (e)(1) of this clause; and

(B) The dates that such withholding began and ended; and

(6) *Interest to Government.* Be obligated to pay to the Government an amount equal to interest on the withheld payments (computed in the manner provided in 31 U.S.C. 3903(c)(1)), from the 8th day after receipt of the withheld amounts from the Government until—

(i) The day the identified subcontractor performance deficiency is corrected; or

(ii) The date that any subsequent payment is reduced under paragraph (e)(5)(i) of this

clause.

(f) *Third-party deficiency reports*—(1) *Withholding from subcontractor.* If a Contractor, after making payment to a first-tier subcontractor, receives from a supplier or subcontractor of the first-tier subcontractor (hereafter referred to as a “second-tier subcontractor”) a written notice in accordance with section 2 of the Act of August 24, 1935 (40 U.S.C. 270b, Miller Act), asserting a deficiency in such first-tier subcontractor’s performance under the contract for which the Contractor may be ultimately liable, and the Contractor determines that all or a portion of future payments otherwise due such first-tier subcontractor is subject to withholding in accordance with the subcontract agreement, the Contractor may, without incurring an obligation to pay an interest penalty under paragraph (e)(6) of this clause—

(i) Furnish to the first-tier subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon making such determination; and

(ii) Withhold from the first-tier subcontractor’s next available progress payment or payments an amount not to exceed the amount specified in the notice of withholding furnished under paragraph (f)(1)(i) of this clause.

(2) *Subsequent payment or interest charge.* As soon as practicable, but not later than 7 days after receipt of satisfactory written notification that the identified subcontract performance deficiency has been corrected, the Contractor shall—

(i) Pay the amount withheld under paragraph (f)(1)(ii) of this clause to such first-tier subcontractor; or

(ii) Incur an obligation to pay a late payment interest penalty to such first-tier subcontractor computed at the rate of interest established by the Secretary of the Treasury, and published in the **Federal Register**, for interest payments under section 12 of the Contracts Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty.

(g) *Written notice of subcontractor withholding.* The Contractor shall issue a written notice of any withholding to a subcontractor (with a copy furnished to the Contracting Officer), specifying—

(1) The amount to be withheld;

(2) The specific causes for the withholding under the terms of the subcontract; and

(3) The remedial actions to be taken by the subcontractor in order to receive payment of the amounts withheld.

(h) *Subcontractor payment entitlement.* The Contractor may not request payment from the Government of any amount withheld or retained in accordance with paragraph (d) of this clause until such time as the Contractor has determined and certified to the Contracting Officer that the subcontractor is entitled to the payment of such amount.

(i) *Prime-subcontractor disputes.* A dispute between the Contractor and subcontractor relating to the amount or entitlement of a subcontractor to a payment or a late payment interest penalty under a clause included in the subcontract pursuant to paragraph (c) of this clause does not constitute a dispute to which the Government is a party. The Government may not be interpleaded in any judicial or administrative proceeding involving such a dispute.

(j) *Preservation of prime-subcontractor rights.* Except as provided in paragraph (i) of this clause, this clause shall not limit or impair any contractual, administrative, or judicial remedies otherwise available to the Contractor or a subcontractor in the event of a dispute involving late payment or nonpayment by the Contractor or deficient subcontract performance or nonperformance by a subcontractor.

(k) *Non-recourse for prime contractor interest penalty.* The Contractor’s obligation to pay an interest penalty to a subcontractor pursuant to the clauses included in a subcontract under paragraph (c) of this clause shall not be construed to be an obligation of the Government for such interest penalty. A cost-reimbursement claim may

not include any amount for reimbursement of such interest penalty.

(1) *Overpayments*. If the Contractor becomes aware of a duplicate contract financing or invoice payment or that the Government has otherwise overpaid on a contract financing or invoice payment, the Contractor shall immediately notify the Contracting Officer and request instructions for disposition of the overpayment.
(End of clause)

85. *FAR 52.232-33 PAYMENT BY ELECTRONIC FUNDS TRANSFER –CENTRAL CONTRACTOR REGISTRATION (OCT 2003)

(a) *Method of payment*. (1) All payments by the Government under this contract shall be made by electronic funds transfer (EFT), except as provided in paragraph (a)(2) of this clause. As used in this clause, the term “EFT” refers to the funds transfer and may also include the payment information transfer.

(2) In the event the Government is unable to release one or more payments by EFT, the Contractor agrees to either—

(i) Accept payment by check or some other mutually agreeable method of payment; or

(ii) Request the Government to extend the payment due date until such time as the Government can make payment by EFT (but see paragraph (d) of this clause).

(b) *Contractor’s EFT information*. The Government shall make payment to the Contractor using the EFT information contained in the Central Contractor Registration (CCR) database. In the event that the EFT information changes, the Contractor shall be responsible for providing the updated information to the CCR database.

(c) *Mechanisms for EFT payment*. The Government may make payment by EFT through either the Automated Clearing House (ACH) network, subject to the rules of the National Automated Clearing House Association, or the Fedwire Transfer System. The rules governing Federal payments through the ACH are contained in 31 CFR part 210.

(d) *Suspension of payment*. If the Contractor’s EFT information in the CCR database is incorrect, then the Government need not make payment to the Contractor under this contract until correct EFT information is entered into the CCR database; and any invoice or contract financing request shall be deemed not to be a proper invoice for the purpose of prompt payment under this contract. The prompt payment terms of the contract regarding notice of an improper invoice and delays in accrual of interest penalties apply.

(e) *Contractor EFT arrangements*. If the Contractor has identified multiple payment receiving points (i.e., more than one remittance address and/or EFT information set) in the CCR database, and the Contractor has not notified the Government of the payment receiving point applicable to this contract, the Government shall make payment to the first payment receiving point (EFT information set or remittance address as applicable) listed in the CCR database.

(f) *Liability for uncompleted or erroneous transfers*. (1) If an uncompleted or erroneous transfer occurs because the Government used the Contractor’s EFT information incorrectly, the Government remains responsible for—

(i) Making a correct payment;

(ii) Paying any prompt payment penalty due; and

(iii) Recovering any erroneously directed funds.

(2) If an uncompleted or erroneous transfer occurs because the Contractor’s EFT information was incorrect, or was revised within 30 days of Government release of the EFT payment transaction instruction to the Federal Reserve System, and—

(i) If the funds are no longer under the control of the payment office, the Government is deemed to have made payment and the Contractor is responsible for recovery of any erroneously directed funds; or

(ii) If the funds remain under the control of the payment office, the Government shall not make payment, and the provisions of paragraph (d) of this clause shall apply.

(g) *EFT and assignment of claims*. If the Contractor assigns the proceeds of this contract as provided for in the assignment of claims terms of this contract, the Contractor shall require as a condition of any such assignment, that the assignee shall register separately in the CCR database and shall be paid by EFT in accordance with the terms of this clause. Notwithstanding any other requirement of this contract, payment to an ultimate recipient other than the Contractor, or a financial institution properly recognized under an assignment of claims pursuant to Subpart

32.8, is not permitted. In all respects, the requirements of this clause shall apply to the assignee as if it were the Contractor. EFT information that shows the ultimate recipient of the transfer to be other than the Contractor, in the absence of a proper assignment of claims acceptable to the Government, is incorrect EFT information within the meaning of paragraph

(d) of this clause.

(h) *Liability for change of EFT information by financial agent.* The Government is not liable for errors resulting from changes to EFT information made by the Contractor's financial agent.

(i) *Payment information.* The payment or disbursing office shall forward to the Contractor available payment information that is suitable for transmission as of the date of release of the EFT instruction to the Federal Reserve System. The Government may request the Contractor to designate a desired format and method(s) for delivery of payment information from a list of formats and methods the payment office is capable of executing. However, the Government does not guarantee that any particular format or method of delivery is available at any particular payment office and retains the latitude to use the format and delivery method most convenient to the Government. If the Government makes payment by check in accordance with paragraph (a) of this clause, the Government shall mail the payment information to the remittance address contained in the CCR database.
(End of Clause)

86. DFARS 252.232-7004 DOD PROGRESS PAYMENT RATES (OCT 2001)

(a) If the contractor is a small business concern, the Progress Payments clause of this contract is modified to change each mention of the progress payment rate and liquidation rate (excepting paragraph (k), *Limitations on Undefined Contract Actions*) to 90 percent.

(b) If the contractor is a small disadvantaged business concern, the Progress Payments clause of this contract is modified to change each mention of the progress payment rate and liquidation rate (excepting paragraph (k), *Limitations on Undefined Contract Actions*) to 95 percent.
(End of clause)

87. DFARS 252.232-7005 REIMBURSEMENT OF SUBCONTRACTOR ADVANCE PAYMENTS--DOD PILOT MENTOR-PROTEGE PROGRAM (SEP 2001)

(a) The Government will reimburse the Contractor for any advance payments made by the Contractor, as a mentor firm, to a protege firm, pursuant to an approved mentor-protege agreement, provided-

(1) The Contractor's subcontract with the protege firm includes a provision substantially the same as FAR 52.232-12, Advance Payments;

(2) The Contractor has administered the advance payments in accordance with the policies of FAR Subpart 32.4; and

(3) The Contractor agrees that any financial loss resulting from the failure or inability of the protege firm to repay any unliquidated advance payments is the sole financial responsibility of the Contractor.

(b) For a fixed price type contract, advance payments made to a protege firm shall be paid and administered as if they were 100 percent progress payments. The Contractor shall include as a separate attachment with each Standard Form (SF) 1443, Contractor's Request for Progress Payment, a request for reimbursement of advance payments made to a protege firm. The attachment shall provide a separate calculation of lines 14a through 14e of SF 1443 for each protege, reflecting the status of advance payments made to that protege.

(c) For cost reimbursable contracts, reimbursement of advance payments shall be made via public voucher. The Contractor shall show the amounts of advance payments made to each protege on the public voucher, in the form and detail directed by the cognizant contracting officer or contract auditor.
(End of clause)

88. *FAR 52.233-1 DISPUTES (JULY 2002)

(a) This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613).

(b) Except as provided in the Act, all disputes arising under or relating to this contract shall be resolved under this clause.

(c) "Claim," as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to this contract. However, a written demand or written assertion by the Contractor seeking the payment of money exceeding \$100,000 is not a claim under the Act until certified. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim under the Act. The submission may be converted to a claim under the Act, by complying with the submission and certification requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.

(d)(1) A claim by the Contractor shall be made in writing and, unless otherwise stated in this contract, submitted within 6 years after accrual of the claim to the Contracting Officer for a written decision. A claim by the Government against the Contractor shall be subject to a written decision by the Contracting Officer.

(2) (i) Contractors shall provide the certification specified in paragraph (d)(2)(iii) of this clause when submitting any claim exceeding \$100,000.

(ii) The certification requirement does not apply to issues in controversy that have not been submitted as all or part of a claim.

(iii) The certification shall state as follows:

'I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the Contractor believes the Government is liable; and that I am duly authorized to certify the claim on behalf of the Contractor.'

(3) The certification may be executed by any person duly authorized to bind the Contractor with respect to the claim.

(e) For Contractor claims of \$100,000 or less, the Contracting Officer must, if requested in writing by the Contractor, render a decision within 60 days of the request. For Contractor-certified claims over \$100,000, the Contracting Officer must, within 60 days, decide the claim or notify the Contractor of the date by which the decision will be made.

(f) The Contracting Officer's decision shall be final unless the Contractor appeals or files a suit as provided in the Act.

(g) If the claim by the Contractor is submitted to the Contracting Officer or a claim by the Government is presented to the Contractor, the parties, by mutual consent, may agree to use alternative dispute resolution (ADR). If the Contractor refuses an offer for ADR, the Contractor shall inform the Contracting Officer, in writing, of the Contractor's specific reasons for rejecting the offer.

(h) The Government shall pay interest on the amount found due and unpaid from (1) the date the Contracting Officer receives the claim (certified if required), or (2) the date that payment otherwise would be due, if that date is later, until the date of payment. With regard to claims having defective certifications, as defined in (FAR) 48 CFR 33.201, interest shall be paid from the date that the Contracting Officer initially receives the claim. Simple interest on claims shall be paid at the rate, fixed by the Secretary of the Treasury as provided in the Act, which is applicable to the period during which the Contracting Officer receives the claim and then at the rate applicable for each 6-month period as fixed by the Treasury Secretary during the pendency of the claim.

(i) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under the contract, and comply with any decision of the Contracting Officer.

89. *FAR 52.233-3 PROTEST AFTER AWARD (AUG 1996)

(a) Upon receipt of a notice of protest (as defined in FAR 33.101) or a determination that a protest is likely (see FAR 33.102(d)), the Contracting Officer may, by written order to the Contractor, direct the Contractor to stop performance of the work called for by this contract. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take

all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Upon receipt of the final decision in the protest, the Contracting Officer shall either--

- (1) Cancel the stop-work order; or
- (2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.

(b) If a stop-work order issued under this clause is canceled either before or after a final decision in the protest, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if--

- (1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and
- (2) The Contractor asserts its right to an adjustment within 30 days after the end of the period of work stoppage; provided, that if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon a proposal at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

(e) The Government's rights to terminate this contract at any time are not affected by action taken under this clause.

(f) If, as the result of the Contractor's intentional or negligent misstatement, misrepresentation, or miscertification, a protest related to this contract is sustained, and the Government pays costs, as provided in FAR 33.102(b)(2) or 33.104(h)(1), the Government may require the Contractor to reimburse the Government the amount of such costs. In addition to any other remedy available, and pursuant to the requirements of Subpart 32.6, the Government may collect this debt by offsetting the amount against any payment due the Contractor under any contract between the Contractor and the Government.

90. RESERVED

91. FAR 52.236-2 DIFFERING SITE CONDITIONS (APR 1984)

(a) The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the Contracting Officer of

- (1) subsurface or latent physical conditions at the site which differ materially from those indicated in this contract, or
- (2) unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the contract.

(b) The Contracting Officer shall investigate the site conditions promptly after receiving the notice. If the conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the work under this contract, whether or not changed as a result of the conditions, an equitable adjustment shall be made under this clause and the contract modified in writing accordingly.

(c) No request by the Contractor for an equitable adjustment to the contract under this clause shall be allowed, unless the Contractor has given the written notice required, provided, that the time prescribed in (a) above for giving written notice may be extended by the Contracting Officer.

(d) No request by the Contractor for an equitable adjustment to the contract for differing site conditions shall be allowed if made after final payment under this contract.

92. *FAR 52.236-3 SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK (APR

1984)

(a) The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to

- (1) conditions bearing upon transportation, disposal, handling, and storage of materials;
- (2) the availability of labor, water, electric power, and roads;
- (3) uncertainties of weather, river stages, tides, or similar physical conditions at the site;
- (4) the conformation and conditions of the ground; and
- (5) the character of equipment and facilities needed preliminary to and during work

performance. The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Government, as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the Government.

(b) The Government assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the Government. Nor does the Government assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

93. *FAR 52.236-5 MATERIAL AND WORKMANSHIP (APR 1984)

(a) All equipment, material, and articles incorporated into the work covered by this contract shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this contract. References in the specifications to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of the Contracting Officer, is equal to that named in the specifications, unless otherwise specifically provided in this contract.

(b) The Contractor shall obtain the Contracting Officer's approval of the machinery and mechanical and other equipment to be incorporated into the work. When requesting approval, the Contractor shall furnish to the Contracting Officer the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the machinery and mechanical and other equipment. When required by this contract or by the Contracting Officer, the Contractor shall also obtain the Contracting Officer's approval of the material or articles which the Contractor contemplates incorporating into the work. When requesting approval, the Contractor shall provide full information concerning the material or articles. When directed to do so, the Contractor shall submit samples for approval at the Contractor's expense, with all shipping charges prepaid. Machinery, equipment, material, and articles that do not have the required approval shall be installed or used at the risk of subsequent rejection.

(c) All work under this contract shall be performed in a skillful and workmanlike manner. The Contracting Officer may require, in writing, that the Contractor remove from the work any employee the Contracting Officer deems incompetent, careless, or otherwise objectionable.

94. RESERVED

95. *FAR 52.236-6 SUPERINTENDENCE BY THE CONTRACTOR (APR 1984)

At all times during performance of this contract and until the work is completed and accepted, the Contractor shall directly superintend the work or assign and have on the work site a competent superintendent who is satisfactory to the Contracting Officer and has authority to act for the Contractor.

96. FAR 52.236-7 PERMITS AND RESPONSIBILITIES (NOV 1991)

The Contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses and permits, and for complying with any Federal, State, and municipal laws, codes, and regulations applicable to the performance of the work. The Contractor shall also be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the contract.

97. *FAR 52.236-8 OTHER CONTRACTS (APR 1984)

The Government may undertake or award other contracts for additional work at or near the site of the work under this contract. The Contractor shall fully cooperate with the other contractors and with Government employees and shall carefully adapt scheduling and performing the work under this contract to accommodate the additional work, heeding any direction that may be provided by the Contracting Officer. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor or by Government employees.

98. *FAR 52.236-9 PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS (APR 1984)

(a) The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this contract. The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during contract performance, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Contracting Officer.

(b) The Contractor shall protect from damage all existing improvements and utilities

- (1) at or near the work site, and
- (2) on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. The Contractor shall repair any damage to those facilities, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refused to repair the damage promptly, the Contracting Officer may have the necessary work performed and charge the cost to the Contractor.

99. *FAR 52.236-10 OPERATIONS AND STORAGE AREAS (APR 1984)

(a) The Contractor shall confine all operations (including storage of materials) on Government premises to areas authorized or approved by the Contracting Officer. The Contractor shall hold and save the Government, its officers and agents, free and harmless from liability of any nature occasioned by the Contractor's performance.

(b) Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be erected by the Contractor only with the approval of the Contracting Officer and shall be built with labor and materials furnished by the Contractor without expense to the Government. The temporary buildings and utilities shall remain the property

of the Contractor and shall be removed by the Contractor at its expense upon completion of the work. With the written consent of the Contracting Officer, the buildings and utilities may be abandoned and need not be removed.

(c) The Contractor shall, under regulations prescribed by the Contracting Officer, use only established roadways, or use temporary roadways constructed by the Contractor when and as authorized by the Contracting Officer. When materials are transported in prosecuting the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any Federal, State, or local law or regulation. When it is necessary to cross curbs or sidewalks, the Contractor shall protect them from damage. The Contractor shall repair or pay for the repair of any damaged curbs, sidewalks, or roads.

100.*FAR 52.236-11 USE AND POSSESSION PRIOR TO COMPLETION (APR 1984)

(a) The Government shall have the right to take possession of or use any completed or partially completed part of the work. Before taking possession of or using any work, the Contracting Officer shall furnish the Contractor a list of items of work remaining to be performed or corrected on those portions of the work that the Government intends to take possession of or use. However, failure of the Contracting Officer to list any item of work shall not relieve the Contractor of responsibility for complying with the terms of the contract. The Government's possession or use shall not be deemed an acceptance of any work under the contract.

(b) While the Government has such possession or use, the Contractor shall be relieved of the responsibility for the loss of or damage to the work resulting from the Government's possession or use, notwithstanding the terms of the clause in this contract entitled "Permits and Responsibilities." If prior possession or use by the Government delays the progress of the work or causes additional expense to the Contractor, an equitable adjustment shall be made in the contract price or the time of completion, and the contract shall be modified in writing accordingly.

101.*FAR 52.236-12 CLEANING UP (APR 1984)

The Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. Before completing the work, the Contractor shall remove from the work and premises any rubbish, tools, scaffolding, equipment, and materials that are not the property of the Government. Upon completing the work, the Contractor shall leave the work area in a clean, neat, and orderly condition satisfactory to the Contracting Officer.

102.*FAR 52.236-13 ACCIDENT PREVENTION-ALTERNATE I (NOV 1991)

(a) The Contractor shall provide and maintain work environments and procedures which will (1) safeguard the public and Government personnel, property, materials, supplies, and equipment exposed to Contractor operations and activities; (2) avoid interruptions of Government operations and delays in project completion dates; and (3) control costs in the performance of this contract.

(b) For these purposes on contracts for construction or dismantling, demolition, or removal of improvements, the Contractor shall--

(1) Provide appropriate safety barricades, signs, and signal lights;
(2) Comply with the standards issued by the Secretary of Labor at 29 CFR Part 1926 and 29 CFR Part 1910; and

(3) Ensure that any additional measures the Contracting Officer determines to be reasonably necessary for the purposes are taken.

(c) If this contract is for construction or dismantling, demolition or removal of improvements with any Department of Defense agency or component, the Contractor shall comply with all pertinent provisions of the latest version of U.S. Army Corps of engineers Safety and Health Requirements Manual, EM 385-1-1, in effect on the date of the solicitation.

(d) Whenever the Contracting Officer becomes aware of any noncompliance with these requirements or any condition which poses a serious or imminent danger to the health or safety of the public or Government personnel, the Contracting Officer shall notify the Contractor orally, with written confirmation, and request immediate initiation of corrective action. This notice, when delivered to the Contractor or the Contractor's representative at the work site, shall be deemed sufficient notice of the noncompliance and that corrective action is required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to promptly take corrective action, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall not be entitled to any equitable adjustment of the contract price or extension of the performance schedule on any stop work order issued under this clause.

(e) The Contractor shall insert this clause, including this paragraph (e), with appropriate changes in the designation of the parties, in subcontractors.

(f) Before commencing the work, the Contractor shall--

(1) Submit a written proposed plan for implementing this clause. The plan shall include an analysis of the significant hazards to life, limb, and property inherent in contract work performance and a plan for controlling these hazards; and

(2) Meet with representatives of the Contracting Officer to discuss and develop a mutual understanding relative to administration of the overall safety program.

103.*FAR 52.236-14 AVAILABILITY AND USE OF UTILITY SERVICES (APR 1984)

(a) The Government shall make all reasonably required amounts of utilities available to the Contractor from existing outlets and supplies, as specified in the contract. Unless otherwise provided in the contract, the amount of each utility service consumed shall be charged to or paid for by the Contractor at prevailing rates charged to the Government or, where the utility is produced by the Government, at reasonable rates determined by the Contracting Officer. The Contractor shall carefully conserve any utilities furnished without charge.

(b) The Contractor, at its expense and in a workmanlike manner satisfactory to the Contracting Officer, shall install and maintain all necessary temporary connections and distribution lines, and all meters required to measure the amount of each utility used for the purpose of determining charges. Before final acceptance of the work by the Government, the Contractor shall remove all the temporary connections, distribution lines, meters, and associated paraphernalia.

104.FAR 52.236-15 SCHEDULES FOR CONSTRUCTION CONTRACTS (APR 1984)

(a) The Contractor shall, within five days after the work commences on the contract or another period of time determined by the Contracting Officer, prepare and submit to the Contracting Officer for approval three copies of a practicable schedule showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the several salient features of the work (including acquiring materials, plant, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period. If the Contractor fails to submit a schedule within the time prescribed, the Contracting Officer may withhold approval of progress payments until the Contractor submits the required schedule.

(b) The Contractor shall enter the actual progress on the chart as directed by the Contracting Officer, and upon doing so shall immediately deliver three copies of the annotated schedule to the Contracting Officer. If, in the opinion of the Contracting Officer, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Contracting Officer, without additional cost to the Government. In this circumstance, the Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of construction plant, and to submit for approval any supplementary schedule or schedules in chart form as the Contracting Officer deems necessary to demonstrate how the approved rate of progress will be regained.

(c) Failure of the Contractor to comply with the requirements of the Contracting Officer under this clause shall be grounds for a determination by the Contracting Officer that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the contract. Upon making this determination, the Contracting Officer may terminate the Contractor's right to proceed with the work, or any separable part of it, in accordance with the default terms of this contract.

105.*FAR 52.236-17 LAYOUT OF WORK (APR 1984)

The Contractor shall lay out its work from Government-established base lines and bench marks indicated on the drawings, and shall be responsible for all measurements in connection with the layout. The Contractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to lay out any part of the work. The Contractor shall be responsible for executing the work to the lines and grades that may be established or indicated by the Contracting Officer. The Contractor shall also be responsible for maintaining and preserving all stakes and other marks established by the Contracting Officer until authorized to remove them. If such marks are destroyed by the Contractor or through its negligence before their removal is authorized, the Contracting Officer may replace them and deduct the expense of the replacement from any amounts due or to become due to the Contractor.

106.FAR 52.236-21 SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION (FEB 1997)

(a) The Contractor shall keep on the work site a copy of the drawings and specifications and shall at all times give the Contracting Officer access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, the specifications shall govern. In case of discrepancy in the figures, in the drawings, or in the specifications, the matter shall be promptly submitted to the Contracting Officer, who shall promptly make a determination in writing. Any adjustment by the Contractor without such a determination shall be at its own risk and expense. The Contracting Officer shall furnish from time to time such detailed drawings and other information as considered necessary, unless otherwise provided.

(b) Wherever in the specifications or upon the drawings the words "directed," "required," "ordered," "designated," "prescribed," or words of like import are used, it shall be understood that the "direction," "requirement," "order," "designation," or "prescription," of the Contracting Officer is intended and similarly the words "approved," "acceptable," "satisfactory," or words of like import shall mean "approved by," or "acceptable to," or "satisfactory to" the Contracting Officer, unless otherwise expressly stated.

(c) Where "as shown," "as indicated," "as detailed," or words of similar import are used, it shall be understood that the reference is made to the drawings accompanying this contract unless stated otherwise. The word "provided" as used herein shall be understood to mean "provide complete in place," that is "furnished and installed."

(d) Shop drawings means drawings, submitted to the Government by the Contractor, subcontractor, or any lower tier subcontractor pursuant to a construction contract, showing in detail

(1) the proposed fabrication and assembly of structural elements, and
(2) the installation (i.e., fit, and attachment details) of materials or equipment. It includes drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, and similar materials furnished by the Contractor to explain in detail specific portions of the work required by the contract. The Government may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.

(e) If this contract requires shop drawings, the Contractor shall coordinate all such drawings, and review them for accuracy, completeness, and compliance with contract requirements and shall indicate its approval thereon as evidence of such coordination and review. Shop drawings submitted to the Contracting Officer without evidence of the Contractor's approval may be returned for resubmission. The Contracting Officer will indicate an approval or disapproval of the shop drawings and if not approved as submitted shall indicate the Government's reasons therefor. Any work done before such approval shall be at the Contractor's risk. Approval by the Contracting Officer shall not relieve the Contractor from responsibility for any errors or omissions in such drawings,

nor from responsibility for complying with the requirements of this contract, except with respect to variations described and approved in accordance with (f) below.

(f) If shop drawings show variations from the contract requirements, the Contractor shall describe such variations in writing, separate from the drawings, at the time of submission. If the Contracting Officer approves any such variation, the Contracting Officer shall issue an appropriate contract modification, except that, if the variation is minor or does not involve a change in price or in time of performance, a modification need not be issued.

(g) The Contractor shall submit to the Contracting Officer for approval four copies (unless otherwise indicated) of all shop drawings as called for under the various headings of these specifications. Three sets (unless otherwise indicated) of all shop drawings, will be retained by the Contracting Officer and one set will be returned to the Contractor.

107. *FAR 52.236-26 PRECONSTRUCTION CONFERENCE (FEB 1995)

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

108. DFARS 252.236-7000 MODIFICATION OF PROPOSALS - PRICE BREAKDOWN (DEC 1991)

(a) The Contractor shall furnish a price breakdown, itemized as required and within the time specified by the Contracting Officer, with any proposal for a contract modification.

(b) The price breakdown--

(1) Must include sufficient detail to permit an analysis of profit, and of all costs for--

(i) Material;

(ii) Labor,

(iii) Equipment;

(iv) Subcontracts; and

(2) Must cover all work involved in the modification, whether the work was deleted, added, or changed.

(c) The Contractor shall provide similar price breakdowns to support any amounts claimed for subcontracts.

(d) The Contractor's proposal shall include a justification for any time extension proposed.

109. DFARS 252.236-7008 CONTRACT PRICES - BIDDING SCHEDULES (DEC 1991)

(a) The Government's payment for the items listed in the Bidding Schedule shall constitute full compensation to the Contractor for--

(1) Furnishing all plant, labor, equipment, appliances, and materials; and

(2) Performing all operations required to complete the work in conformity with the drawings

and specifications.

(b) The Contractor shall include in the prices for the items listed in the Bidding Schedule all costs for work in the specifications, whether or not specifically listed in the Bidding Schedule.

110. *FAR 52.242-13 BANKRUPTCY (JUL 1995)

In the event the Contractor enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the Contractor agrees to furnish, by certified mail or electronic commerce method authorized by the contract, written notification of the bankruptcy to the Contracting Officer responsible for administering the contract. This notification shall be furnished within five days of the initiation of the proceedings relating to bankruptcy filing. This

notification shall include the date on which the bankruptcy petition was filed, the identity of the court in which the bankruptcy petition was filed, and a listing of Government contract numbers and contracting offices for all Government contracts against which final payment has not been made. This obligation remains in effect until final payment under this contract.

111. *FAR 52.242-14 SUSPENSION OF WORK (APR 1984)

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

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

(c) A claim under this clause shall not be allowed (1) for any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order), and (2) unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

112. FAR 52.243-4 CHANGES (AUG 1987)

(a) The Contracting Officer may, at any time, without notice to the sureties, if any, by written order designated or indicated to be a change order, make changes in the work within the general scope of the contract, including changes--

- (1) In the specifications (including drawings and designs);
- (2) In the method or manner of performance of the work;
- (3) In the Government-furnished facilities, equipment, materials, services, or site; or
- (4) Directing acceleration in the performance of the work.

(b) Any other written or oral order (which, as used in this paragraph (b), includes direction, instruction, interpretation, or determination) from the Contracting Officer that causes a change shall be treated as a change order under this clause; provided, that the Contractor gives the Contracting Officer written notice stating

- (1) the date, circumstances, and source of the order and
- (2) that the Contractor regards the order as a change order.

(c) Except as provided in this clause, no order, statement, or conduct of the Contracting Officer shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment.

(d) If any change under this clause causes an increase or decrease in the Contractor's cost of, or the time required for, the performance of any part of the work under this contract, whether or not changed by any such order, the Contracting Officer shall make an equitable adjustment and modify the contract in writing. However, except for an adjustment based on defective specifications, no adjustment for any change under paragraph (b) of this clause shall be made for any costs incurred more than 20 days before the Contractor gives written notice as required. In the case of defective specifications for which the Government is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the Contractor in attempting to comply with the defective specifications.

- (e) The Contractor must assert its right to an adjustment under this clause within 30 days after
- (1) receipt of a written change order under paragraph (a) of this clause or

(2) the furnishing of a written notice under paragraph (b) of this clause, by submitting to the Contracting Officer a written statement describing the general nature and amount of the proposal, unless this period is extended by the Government. The statement of proposal for adjustment may be included in the notice under paragraph (b) above.

(f) No proposal by the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this contract.

113. DFARS 252.243-7001 PRICING OF CONTRACT MODIFICATIONS (DEC 1991)

When costs are a factor in any price adjustment under this contract, the contract cost principles and procedures in FAR Part 31 and DFARS Part 231, in effect on the date of this contract, apply.

114. DFARS 252.243-7002 REQUESTS FOR EQUITABLE ADJUSTMENT (MAR 1998)

(a) The amount of any request for equitable adjustment to contract terms shall accurately reflect the contract adjustment for which the Contractor believes the Government is liable. The request shall include only costs for performing the change, and shall not include any costs that already have been reimbursed or that have been separately claimed. All indirect costs included in the request shall be properly allocable to the change in accordance with applicable acquisition regulations.

(b) In accordance with 10 U.S.C. 2410(a), any request for equitable adjustment to contract terms that exceeds the simplified acquisition threshold shall bear, at the time of submission, the following certificate executed by an individual authorized to certify the request on behalf of the Contractor:

I certify that the request is made in good faith, and that the supporting data are accurate and complete to the best of my knowledge and belief.

(Official's Name)

(Title)

(c) The certification in paragraph (b) of this clause requires full disclosure of all relevant facts, including--

(1) Cost or pricing data if required in accordance with subsection 15.403-4 of the Federal Acquisition Regulation; and

(2) Information other than cost or pricing data, in accordance with subsection 15.403-3 of the FAR, including actual cost data and data to support any estimated costs, even if cost or pricing data are not required.

(d) The certification requirement in paragraph (b) of this clause does not apply to----

(1) Requests for routine contract payments; for example, requests for payment for accepted supplies and services, routine vouchers under a cost-reimbursement type contract, or progress payment invoices; or

(2) Final adjustment under an incentive provision of the contract.

(End of clause)

115. *FAR 52.244-2 SUBCONTRACTS (AUG 1998)

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

"Approved purchasing system" means a Contractor's purchasing system that has been reviewed and approved in accordance with Part 44 of the Federal Acquisition Regulation (FAR).

"Consent of subcontract" means the Contracting Officer's written consent for the Contractor to enter into a particular subcontract.

"Subcontract," means any contract, as defined in FAR Subpart 2.1, entered into by a subcontractor to furnish supplies or services for performance of the the prime contract or a subcontract. It includes, but is not limited to purchase orders, and changes and modifications to purchase orders.

(b) This clause does not apply to subcontracts for special test equipment when the contract contains the clause at FAR 52.245-18, Special Test Equipment.

(c) When this clause is included in a fixed-price type contract, consent to subcontract is required only on unpriced contract actions (including unpriced modification or unpriced delivery orders), and only if required in accordance with paragraph (d) or (e) of this clause.

(d) If the Contractor does not have an approved purchasing system, consent to subcontract is required for any subcontract that--

(1) Is of the cost-reimbursement, time-and-materials, or labor-hour type; or

(2) Is fixed-price and exceeds--

(i) For a contract awarded by the Department of Defense, the Coast Guard, or the National Aeronautics and Space Administration, the greater of the simplified threshold or 5 percent of the total estimated cost of the contract; or

(ii) For a contract awarded by a civilian agency other than the Coast Guard and the National Aeronautics and Space Administration, either the the simplified threshold or 5 percent of the total estimated cost of the contract.

(e) If the Contractor has an approved purchasing system, the Contractor nevertheless shall obtain the Contracting Officer's written consent before placing the following subcontracts:

(f)(1) The Contractor shall notify the Contracting Officer reasonably in advance of placing any subcontract or modification thereof for which consent is required under paragraph (c), (d), or (e) of this clause, including the following information:

(i) A description of the supplies or services to be subcontracted.

(ii) Identification of the type of subcontract to be used.

(iii) Identification of the proposed subcontractor.

(iv) The proposed subcontract price.

(v) The subcontractor's current, complete, and accurate cost or pricing data and Certificate of Current Cost or Pricing Data, if required by other contract provisions.

(vi) The subcontractor's Disclosure Statement or Certificate relating to Cost Accounting Standards when such data are required by other provisions of this contract.

(vii) A negotiation memorandum reflecting--

(A) The principal elements of the subcontract price negotiations;

(B) The most significant considerations controlling establishment of initial or

revised prices;

- (C) The reason cost or pricing data were or were not required;
 - (D) The extent, if any, to which the Contractor did not rely on the subcontractor's cost or pricing data in determining the price objective and in negotiating the final price;
 - (E) The extent to which it was recognized in the negotiation that the subcontractor's cost or pricing data were not accurate, complete, or current; the action taken by the Contractor and subcontractor; and the effect of any such defective data on the total price negotiated;
 - (F) The reasons for any significant difference between the Contractor's price objective and the price negotiated; and
 - (G) A complete explanation of the incentive fee or profit plan when incentives are used. The explanation shall identify each critical performance element, management decisions used to quantify each incentive element, reasons for the incentives, and a summary of all trade-off possibilities considered.
- (2) The Contractor is not required to notify the Contracting Officer in advance of entering into any subcontract for which consent is not required under paragraph (c), (d), or (e) of this clause.
- (g) Unless the consent or approval specifically provides otherwise, neither consent by the Contracting Officer to any subcontract nor approval of the Contractor's purchasing system shall constitute a determination--
 - (1) Of the acceptability of any subcontract terms or conditions;
 - (2) Of the acceptability of any cost under this contract; or
 - (3) To relieve the Contractor of any responsibility for performing this contract.
 - (h) No subcontract or modification thereof placed under this contract shall provide for payment on a cost-plus-a-percentage-of-cost basis, and any fee payable under cost-reimbursement subcontracts shall not exceed the fee limitations in FAR 15.404-4(c)(4)(i).
 - (i) The Contractor shall give the Contracting Officer immediate written notice of any action or suit filed and prompt notice of any claim made against the Contractor by any subcontractor or vendor that, in the opinion of the Contractor, may result in litigation related in any way to this contract, with respect to which the Contractor may be entitled to reimbursement by the Government.
 - (j) The Government reserves the right to review the Contractor's purchasing system as set forth in FAR Subpart 44.3.
 - (k) Paragraphs (d) and (f) of this clause do not apply to the following subcontracts, which ere evaluated during negotiations:

(End of clause)

116. FAR 52.244-6 SUBCONTRACTS FOR COMMERCIAL ITEMS (JULY 2004)

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

"Commercial item" has the meaning contained in Federal Acquisition Regulation 2.101, Definitions.

"Subcontract" includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.

(b) To the maximum extent practicable, the Contractor shall incorporate, and require its subcontractors at all tiers to incorporate, commercial items or nondevelopmental items as components of items to be supplied under this contract.

(c)(1) The Contractor shall insert the following clauses in subcontracts for commercial items:

(i) 52.219-8, Utilization of Small Business Concerns (May 2004) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$500,000 (\$1,000,000 for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(ii) 52.222-26, Equal Opportunity (Apr 2002) (E.O. 11246).

(iii) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Dec 2001) (38 U.S.C. 4212(a));

(iv) 52.222-36, Affirmative Action for Workers with Disabilities (June 1998) (29 U.S.C.

793).

(v) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (APR 2003) (46 U.S.C. Appx 1241 and 10 U.S.C. 2631) (flow down required in accordance with paragraph (d) of FAR clause 52.247-64).

(2) While not required, the Contractor may flow down to subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

(d) The Contractor shall include the terms of this clause, including this paragraph (d), in subcontracts awarded under this contract.

(End of clause)

117. *FAR 52.245-2 GOVERNMENT PROPERTY (FIXED-PRICE CONTRACTS) (MAY 2004) [For Government Property over \$100,000]

(a) Government-furnished property.

(1) The Government shall deliver to the Contractor, for use in connection with and under the terms of this contract, the Government-furnished property described in the Schedule or specifications together with any related data and information that the Contractor may request and is reasonably required for the intended use of the property (hereinafter referred to as "Government-furnished property").

(2) The delivery or performance dates for this contract are based upon the expectation that Government-furnished property suitable for use (except for property furnished "as is") will be delivered to the Contractor at the times stated in the Schedule or, if not so stated, in sufficient time to enable the Contractor to meet the contract's delivery or performance dates.

(3) If Government-furnished property is received by the Contractor in a condition not suitable for the intended use, the Contractor shall, upon receipt of it, notify the Contracting Officer, detailing the facts, and, as directed by the Contracting Officer and at Government expense, either repair, modify, return, or otherwise dispose of the property. After completing the directed action and upon written request of the Contractor, the Contracting Officer shall make an equitable adjustment as provided in paragraph (h) of this clause.

(4) If Government-furnished property is not delivered to the Contractor by the required time, the Contracting Officer shall, upon the Contractor's timely written request, make a determination of the delay, if any, caused the Contractor and shall make an equitable adjustment in accordance with paragraph (h) of this clause.

(b) Changes in Government-furnished property.

(1) The Contracting Officer may, by written notice,
(i) decrease the Government-furnished property provided or to be provided under this contract, or
(ii) substitute other Government-furnished property for the property to be provided by the Government, or to be acquired by the Contractor for the Government, under this contract. The Contractor shall promptly take such action as the Contracting Officer may direct regarding the removal, shipment, or disposal of the property covered by such notice.

(2) Upon the Contractor's written request, the Contracting Officer shall make an equitable adjustment to the contract in accordance with paragraph (h) of this clause, if the Government has agreed in the Schedule to make the property available for performing this contract and there is any--

(i) Decrease or substitution in this property pursuant to subparagraph (b)(1) above;
or
(ii) Withdrawal of authority to use this property, if provided under any other contract or lease.

(c) Title in Government property.

(1) The Government shall retain title to all Government-furnished property.

(2) All Government-furnished property and all property acquired by the Contractor, title to which vests in the Government under this paragraph (collectively referred to as "Government property"), are subject to the provisions of this clause. However, special tooling accountable to this contract is subject to the provisions of the Special Tooling clause and is not subject to the provisions of this clause. Title to Government property shall not be affected by its incorporation into or attachment to any property not owned by the Government, nor shall

government property become a fixture or lose its identity as personal property by being attached to any real property.

(3) Title to each item of facilities and special test equipment acquired by the Contractor for the Government under this contract shall pass to and vest in the Government when its use in performing this contract commences or when the Government has paid for it, whichever is earlier, whether or not title previously vested in the Government.

(4) If this contract contains a provision directing the Contractor to purchase material for which the Government will reimburse the Contractor as a direct item of cost under this contract--

(i) Title to material purchased from a vendor shall pass to and vest in the Government upon the vendor's delivery of such material; and

(ii) Title to all other material shall pass to and vest in the Government upon--

(A) Issuance of the material for use in contract performance;

(B) Commencement of processing of the material or its use in contract

performance; or

(C) Reimbursement of the cost of the material by the Government, whichever

occurs first.

(d) Use of Government property. The Government property shall be used only for performing this contract, unless otherwise provided in this contract or approved by the Contracting Officer.

(e) Property Administration.

(1) The Contractor shall be responsible and accountable for all Government property provided under this contract and shall comply with Federal Acquisition Regulation (FAR) Subpart 45.5, as in effect on the date of this contract.

(2) The Contractor shall establish and maintain a program for the use, maintenance, repair, protection, and preservation of Government property in accordance with sound industrial practice and the applicable provisions of Subpart 45.5 of the FAR.

(3) If damage occurs to Government property, the risk of which has been assumed by the Government under this contract, the Government shall replace the items or the Contractor shall make such repairs as the Government directs. However, if the Contractor cannot effect such repairs within the time required, the Contractor shall dispose of the property as directed by the Contracting Officer. When any property for which the Government is responsible is replaced or repaired, the Contracting Officer shall make an equitable adjustment in accordance with paragraph (h) of this clause.

(4) The Contractor represents that the contract price does not include any amount for repairs or replacement for which the Government is responsible. Repair or replacement of property for which the Contractor is responsible shall be accomplished by the Contractor at its own expense.

(f) Access. The Government and all its designees shall have access at all reasonable times to the premises in which any Government property is located for the purpose of inspecting the Government property.

(g) Risk of loss. Unless otherwise provided in this contract, the Contractor assumes the risk of, and shall be responsible for, any loss or destruction of, or damage to, Government property upon its delivery to the Contractor or upon passage of title to the Government under paragraph (c) of this clause. However, the Contractor is not responsible for reasonable wear and tear to Government property or for Government property properly consumed in performing this contract.

(h) Equitable adjustment. When this clause specifies an equitable adjustment, it shall be made to any affected contract provision in accordance with the procedures of the Changes clause. When appropriate, the Contracting Officer may initiate an equitable adjustment in favor of the Government. The right to an equitable adjustment shall be the Contractor's exclusive remedy. The Government shall not be liable to suit for breach of contract for--

(1) Any delay in delivery of Government-furnished property;

(2) Delivery of Government-furnished property in a condition not suitable for its intended use;

(3) A decrease in or substitution of Government-furnished property; or

(4) Failure to repair or replace Government property for which the Government is responsible.

(i) *Government property disposal.* Except as provided in paragraphs (i)(1)(i), (i)(2), and (i)(8)(i) of this clause, the Contractor shall not dispose of Government property until authorized to do so by the Plant Clearance Officer.

(1) *Scrap (to which the Government has obtained title under paragraph (c) of this clause).—*

(i) *Contractor with an approved scrap procedure.*—(A) The Contractor may dispose of scrap resulting from production or testing under this contract without Government approval. However, if the scrap requires demilitarization or is sensitive property, the Contractor shall submit the scrap on an inventory disposal schedule.

(B) For scrap from other than production or testing the Contractor may prepare scrap lists in lieu of inventory disposal schedules (provided such lists are consistent with the approved scrap procedures), except that inventory disposal schedules shall be submitted for scrap aircraft or aircraft parts and scrap that—

- (1) Requires demilitarization;
- (2) Is a classified item;
- (3) Is generated from classified items;
- (4) Contains hazardous materials or hazardous wastes;
- (5) Contains precious metals; or
- (6) Is dangerous to the public health, safety, or welfare.

(ii) *Contractor without an approved scrap procedure.* The Contractor shall submit an inventory disposal schedule for all scrap.

(2) *Pre-disposal requirements.* When the Contractor determines that a property item acquired or produced by the Contractor, to which the Government has obtained title under paragraph (c) of this clause, is no longer needed for performance of this contract, the Contractor, in the following order of priority:

(i) May purchase the property at the acquisition cost.

(ii) Shall make reasonable efforts to return unused property to the appropriate supplier at fair market value (less, if applicable, a reasonable restocking fee that is consistent with the supplier's customary practices).

(iii) Shall list, on Standard Form 1428, Inventory Disposal Schedule, property that was not purchased under paragraph (i)(2)(i) of this clause, could not be returned to a supplier, or could not be used in the performance of other Government contracts.

(3) *Inventory disposal schedules.*—(i) The Contractor shall use Standard Form 1428, Inventory Disposal Schedule, to identify—

(A) Government-furnished property that is no longer required for performance of this contract, provided the terms of another Government contract do not require the Government to furnish that property for performance of that contract; and

(B) Property acquired or produced by the Contractor, to which the Government has obtained title under paragraph (c) of this clause, that is no longer required for performance of that contract.

(ii) The Contractor may annotate inventory disposal schedules to identify property the Contractor wishes to purchase from the Government.

(iii) Unless the Plant Clearance Officer has agreed otherwise, or the contract requires electronic submission of inventory disposal schedules, the Contractor shall prepare separate inventory disposal schedules for—

- (A) Special test equipment with commercial components;
- (B) Special test equipment without commercial components;
- (C) Printing equipment;
- (D) Computers, components thereof, peripheral equipment, and related equipment;
- (E) Precious Metals;
- (F) Nonnuclear hazardous materials or hazardous wastes; or
- (G) Nuclear materials or nuclear wastes.

(iv) Property with the same description, condition code, and reporting location may be

grouped in a single line item. The Contractor shall describe special test equipment in sufficient detail to permit an understanding of the special test equipment's intended use.

(4) *Submission requirements.* The Contractor shall submit inventory disposal schedules to the Plant Clearance Officer no later than—

(i) Thirty days following the Contractor's determination that a Government property item is no longer required for performance of the contract;

(ii) Sixty days, or such longer period as may be approved by the Plant Clearance Officer, following completion of contract deliveries or performance; or

(iii) One hundred twenty days, or such longer period as may be approved by the Plant Clearance Officer, following contract termination in whole or in part.

(5) *Corrections.* The Plant Clearance Officer may require the Contractor to correct an inventory disposal schedule or may reject a schedule if the property identified on the schedule is not accountable under this contract or is not in the quantity or condition indicated.

(6) *Postsubmission adjustments.* The Contractor shall provide the Plant Clearance Officer at least 10 working days advance written notice of its intent to remove a property item from an approved inventory disposal schedule. Unless the Plant Clearance Officer objects to the intended schedule adjustment within the notice period, the Contractor may make the adjustment upon expiration of the notice period.

(7) *Storage.*—(i) The Contractor shall store the property identified on an inventory disposal schedule pending receipt of disposal instructions. The Government's failure to provide disposal instructions within 120 days following acceptance of an inventory disposal schedule might entitle the Contractor to an equitable adjustment for costs incurred to store such property on or after the 121st day.

(ii) The Contractor shall obtain the Plant Clearance Officer's approval to remove Government property from the premises at which the property is currently located prior to receipt of final disposition instructions. If approval is granted, any costs incurred by the Contractor to transport or store the property shall not increase the price or fee of any Government contract. The storage facility shall be appropriate for assuring the property's physical safety and suitability for use. Approval does not relieve the Contractor of any liability under this contract for such property.

(8) *Disposition instructions.*—(i) If the Government does not provide disposition instructions to the Contractor within 45 days following acceptance of a scrap list, the Contractor may dispose of the listed scrap in accordance with the Contractor's approved scrap procedures.

(ii) The Contractor shall prepare for shipment, deliver f.o.b. origin, or dispose of Government property as directed by the Plant Clearance Officer. The Contractor shall remove and destroy any markings identifying the property as Government property prior to disposing of the property.

(iii) The Contracting Officer may require the Contractor to demilitarize the property prior to shipment or disposal. Any equitable adjustment incident to the Contracting Officer's direction to demilitarize Government property shall be made in accordance with paragraph (h) of this clause.

(9) *Disposal proceeds.* The Contractor shall credit the net proceeds from the disposal of Government property to the price or cost of work covered by this contract or to the Government as the Contracting Officer directs.

(10) *Subcontractor inventory disposal schedules.* The Contractor shall require a subcontractor that is using property accountable under this contract at a subcontractor-managed site to submit inventory disposal schedules to the Contractor in sufficient time for the Contractor to comply with the requirements of paragraph (i)(4) of this clause.

(j) *Abandonment of Government property.*—(1) The Government will not abandon sensitive Government

property without the Contractor's written consent.

(2) The Government, upon notice to the Contractor, may abandon any nonsensitive Government property in place at which time all obligations of the Government regarding such abandoned property shall cease.

(3) The Government has no obligation to restore or rehabilitate the Contractor's premises under any circumstances; however, if Government-furnished property is withdrawn or is unsuitable for the intended use, or if other Government property is substituted, then the equitable adjustment under paragraph (h) of this clause may properly include restoration or rehabilitation costs.

(k) Communications. All communications under this clause shall be in writing.

(l) Overseas contracts. If this contract is to be performed outside of the United States of America and its outlying areas, the words "Government" and "Government-furnished" (wherever they appear in this clause) shall be construed as "United States Government" and "United States Government-furnished," respectively.

118. *FAR 52.245-4 GOVERNMENT-FURNISHED PROPERTY (SHORT FORM) (JUNE 2003) [For Government Property \$100,000 or Less]

(a) The Government shall delivery to the Contractor, at the time and locations stated in this contract, the Government-furnished property described in the Schedule or specifications. If that property, suitable for its intended use, is not delivered to the Contractor, the Contracting Officer shall equitably adjust affected provisions of this contract in accordance with the Changed clause when--

- (1) The Contractor submits a timely written request for an equitable adjustment; and
- (2) The facts warrant an equitable adjustment.

(b) Title to Government-furnished property shall remain in the Government. The Contractor shall use the Government-furnished property only in connection with this contract. The Contractor shall maintain adequate property control records in accordance with sound industrial practice and will make such records available for Government inspection at all reasonable times, unless the clause at Federal Acquisition Regulation 52.245-1, Property Records, is included in this contract.

(c) Upon delivery of Government-furnished property to the Contractor, the Contractor assumes the risk and responsibility for its loss or damage, except--

- (1) For reasonable wear and tear;
- (2) To the extent property is consumed in performing this contract; or
- (3) As otherwise provided for by the provisions of this contract.

(d) Upon completing this contract, the Contractor shall follow the instructions of the Contracting Officer regarding the disposition of all Government-furnished property not consumed in performing this contract or previously delivered to the Government. The Contractor shall prepare for shipment, deliver f.o.b. origin, or dispose of the Government property, as may be directed or authorized by the Contracting Officer. The net proceeds of any such disposal shall be credited to the contract price or shall be paid to the Government as directed by the Contracting Officer.

(e) If this contract is to be performed outside the United States of America and its outlying areas, the words "Government" and "Government-furnished" (wherever they appear in this clause) shall be construed as "United States Government" and "United States Government-furnished," respectively.

119. *FAR 52.246-12 INSPECTION OF CONSTRUCTION (AUG 1996)

(a) Definition. "Work" includes, but is not limited to, materials, workmanship, and manufacture and fabrication of components.

(b) The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work performed under the contract conforms to contract requirements. The Contractor shall maintain complete inspection records and make them available to the Government. All work shall be conducted under the

general direction of the Contracting Officer and is subject to Government inspection and test at all places and at all reasonable times before acceptance to ensure strict compliance with the terms of the contract.

(c) Government inspections and tests are for the sole benefit of the Government and do not--

- (1) Relieve the Contractor of responsibility for providing adequate quality control measures;
- (2) Relieve the Contractor of responsibility for damage to or loss of the material before

acceptance;

(3) Constitute or imply acceptance; or

(4) Affect the continuing rights of the Government after acceptance of the completed work

under paragraph (i) below.

(d) The presence or absence of a Government inspector does not relieve the Contractor from any contract requirement, nor is the inspector authorized to change any term or condition of the specification without the Contracting Officer's written authorization.

(e) The Contractor shall promptly furnish, at no increase in contract price, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Contracting Officer. The Government may charge to the Contractor any additional cost of inspection or test when work is not ready at the time specified by the Contractor for inspection or test, or when prior rejection makes reinspection or retest necessary. The Government shall perform all inspections and tests in a manner that will not unnecessarily delay the work. Special, full size, and performance tests shall be performed as described in the contract.

(f) The Contractor shall, without charge, replace or correct work found by the Government not to conform to contract requirements, unless in the public interest the Government consents to accept the work with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.

(g) If the Contractor does not promptly replace or correct rejected work, the Government may

(1) by contract or otherwise, replace or correct the work and charge the cost to the Contractor

or

(2) Terminate for default the Contractor's right to proceed.

(h) If, before acceptance of the entire work, the Government decides to examine already completed work by removing it or tearing it out, the Contractor, on request, shall promptly furnish all necessary facilities, labor, and material. If the work is found to be defective or nonconforming in any material respect due to the fault of the Contractor or its subcontractors, the Contractor shall defray the expenses of the examination and of satisfactory reconstruction. However, if the work is found to meet contract requirements, the Contracting Officer shall make an equitable adjustment for the additional services involved in the examination and reconstruction, including, if completion of the work was thereby delayed, an extension of time.

(i) Unless otherwise specified in the contract, the Government shall accept, as promptly as practicable after completion and inspection, all work required by the contract or that portion of the work the Contracting Officer determines can be accepted separately. Acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, or the Government's rights under any warranty or guarantee.

120. *FAR 52.246-21 WARRANTY OF CONSTRUCTION (MAR 1994)

(a) In addition to any other warranties in this contract, the Contractor warrants, except as provided in paragraph (i) of this clause, that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, or design furnished, or workmanship performed by the Contractor or any subcontractor or supplier at any tier.

(b) This warranty shall continue for a period of 1 year from the date of final acceptance of the work. If the Government takes possession of any part of the work before final acceptance, this warranty shall continue for a period of 1 year from the date the Government takes possession.

(c) The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Government-owned or controlled real or personal property, when that damage is the result of--

- (1) The Contractor's failure to conform to contract requirements; or
- (2) Any defect of equipment, material, workmanship, or design furnished.

(d) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for 1 year from the date of repair or replacement.

(e) The Contracting Officer shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage.

(f) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the Government shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

(g) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall--

- (1) Obtain all warranties that would be given in normal commercial practice;

- (2) Require all warranties to be executed, in writing, for the benefit of the Government, if directed by the Contracting Officer; and

- (3) Enforce all warranties for the benefit of the Government, if directed by the Contracting Officer.

(h) In the event the Contractor's warranty under paragraph (b) of this clause has expired, the Government may bring suit at its expense to enforce a subcontractor's, manufacturer's, or supplier's warranty.

(i) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defects of material or design furnished by the Government nor for the repair of any damage that results from any defect in Government-furnished material or design.

(j) This warranty shall not limit the Government's rights under the Inspection and Acceptance clause of this contract with respect to latent defects, gross mistakes, or fraud.

121. DFARS 252.247-7023 TRANSPORTATION OF SUPPLIES BY SEA (MAR 2000)

(a) Definitions.

As used in this clause--

- (1) "Components" means articles, materials, and supplies incorporated directly into end products at any level of manufacture, fabrication, or assembly by the Contractor or any subcontractor.

- (2) "Department of Defense" (DOD) means the Army, Navy, Air Force, Marine Corps, and defense agencies.

- (3) "Foreign flag vessel" means any vessel that is not a U.S.-flag vessel.

- (4) "Ocean transportation" means any transportation aboard a ship, vessel, boat, barge, or ferry through international waters.

- (5) "Subcontractor" means a supplier, materialman, distributor, or vendor at any level below the prime Contractor whose contractual obligation to perform results from, or is conditioned upon, award of the prime contract and who is performing any part of the work or other requirement of the prime contract.

- (6) "Supplies" means all property, except land and interests in land, that is clearly identifiable for eventual use by or owned by the DoD at the time of transportation by sea.

- (i) An item is clearly identifiable for eventual use by the DoD if, for example, the contract documentation contains a reference to a DoD contract number or a military destination.

(ii) "Supplies" includes (but is not limited to) public works; buildings and facilities; ships; floating equipment and vessels of every character, type, and description, with parts, subassemblies, accessories, and equipment; machine tools; material; equipment; stores of all kinds; end items; construction materials; and components of the foregoing.

(7) "U.S.-flag vessel" means a vessel of the United States or belonging to the United States, including any vessel registered or having national status under the laws of the United States.

(b) (1) The Contractor shall use U.S. -flag vessels when transporting any supplies by sea under this contract.

(2) A subcontractor transporting supplies by sea under this contract shall use U.S.-flag vessel if--

(i) This Contract is a construction contract; or

(ii) The supplies being transported are--

(A) Noncommercial items; or

(B) Commercial items that--

(1) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it subcontracts for f.o.b. destination shipment);

(2) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(3) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

(c) The Contractor and its subcontractors may request that the Contracting Officer authorize shipment in foreign-flag vessels, or designate available U.S.-flag vessels, if the Contractor or a subcontractor believes that--

(1) U.S.-flag vessels are not available for timely shipment;

(2) The freight charges are inordinately excessive or unreasonable; or

(3) Freight charges are higher than charges to private persons for transportation of like goods.

(d) The Contractor must submit any request for use of other than U.S.-flag vessels in writing to the Contracting Officer at least 45 days prior to the sailing date necessary to meet its delivery schedules. The Contracting Officer will process requests submitted after such date(s) as expeditiously as possible, but the Contracting Officer's failure to grant approvals to meet the shipper's sailing date will not of itself constitute a compensable delay under this or any other clause of this contract. Requests shall contain at a minimum--

(1) Type, weight, and cube of cargo;

(2) Required shipping date;

(3) Special handling and discharge requirements;

(4) Loading and discharge points;

(5) Name of shipper and consignee;

(6) Prime contract number, and

(7) A documented description of efforts made to secure U.S.-flag vessels, including points of contact (with names and telephone numbers) with at least two U.S.-flag carriers contacted. Copies of telephone notes, telegraphic and facsimile message or letters will be sufficient for this purpose.

(e) The Contractor shall, within 30 days after each shipment covered by this clause, provide the Contracting Officer and the Division of National Cargo, Office of Market Development, Maritime Administration, U.S. Department of Transportation, Washington, DC 20590, one copy of the rated on board vessel operating carrier's ocean bill of lading, which shall contain the following information--

(1) Prime contract number;

(2) Name of vessel;

(3) Vessel flag of registry;

(4) Date of loading;

(5) Port of loading;

(6) Port of final discharge;

(7) Description of commodity;

(8) Gross weight in pounds and cubic feet if available;

(9) Total ocean freight in U.S. dollars; and

(10) Name of the steamship company.

- (f) The Contractor agrees to provide with its final invoice under this contract a representation that to the best of its knowledge and belief--
- (1) No ocean transportation was used in the performance of this contract;
 - (2) Ocean transportation was used and only U.S.-flag vessels were used for all ocean shipments under the contract;
 - (3) Ocean transportation was used, and the Contractor had the written consent of the Contracting Officer for all non-U.S.-flag ocean transportation; or
 - (4) Ocean transportation was used and some or all of the shipments were made on non-U.S.-flag vessels without the written consent of the Contracting Officer. The Contractor shall describe these shipments in the following format;

ITEM DESCRIPTION	CONTRACT LINE ITEMS	QUANTITY
---------------------	------------------------	----------

TOTAL

(g) If the final invoice does not include the required representation, the Government will reject and return it to the Contractor as an improper invoice for the purposes of the Prompt Payment clause of this contract. In the event there has been unauthorized use of non-U.S.-flag vessels in the performance of this contract, the Contracting Officer is entitled to equitably adjust the contract, based on the unauthorized use.

- (h) The Contractor shall include this clause, including this paragraph (h) in all subcontracts under this contract that-
- (1) Exceed the simplified acquisition threshold in Part 2 of the Federal Acquisition Regulation; and
 - (2) Are for a type of supplies described in paragraph (b) (2) of this clause.

122. DFARS 252.247-7024 NOTIFICATION OF TRANSPORTATION OF SUPPLIES BY SEA (MAR 2000)

(a) The Contractor has indicated by the response to the solicitation provision, Representation of Extent of Transportation by Sea, that it did not anticipate transporting by sea any supplies. If, however, after the award of this contract, the Contractor learns that supplies, as defined in the Transportation of Supplies by Sea clause of this contract, will be transported by sea, the Contractor--

- (1) Shall notify the Contracting Officer of that fact; and
- (2) Hereby agrees to comply with all the terms and conditions of the Transportation of Supplies by Sea clause of this contract.

(b) (1) The Contractor shall use U.S. -flag vessels when transporting any supplies by sea under this contract.

- (2) A subcontractor transporting supplies by sea under this contract shall use U.S.-flag vessel if--
 - (i) This Contract is a construction contract; or
 - (ii) The supplies being transported are-
 - (A) Noncommercial items; or
 - (B) Commercial items that-
 - (1) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it subcontracts for f.o.b. destination shipment);
 - (2) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or
 - (3) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

123. FAR 52.248-3 VALUE ENGINEERING--CONSTRUCTION (FEB 2000) (ALERNATE I (APR 1984))

(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 applied 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) Deleted.

(h) Subcontracts. The Contractor shall include an appropriate value engineering clause in any subcontract of \$50,000 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 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)

124. *FAR 52.249-1 TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE) (SHORT FORM) (APR 1984) [For Contracts \$100,000 or Less]

The Contracting Officer, by written notice, may terminate this contract, in whole or in part, when it is in the Government's interest. If this contract is terminated, the rights, duties, and obligations of the parties, including compensation to the Contractor, shall be in accordance with Part 49 of the Federal Acquisition Regulation in effect on the date of this contract.

125. *FAR 52.249-2 TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE) (MAY 2004) ALTERNATE I (SEP 1996) [For Contracts Over \$100,000]

(a) The Government may terminate performance of work under this contract in whole or, from time to time, in part if the Contracting Officer determines that a termination is in the Government's interest. The Contracting Officer shall terminate by delivering to the Contractor a Notice of Termination specifying the extent of termination and the effective date.

(b) After receipt of a Notice of Termination, and except as directed by the Contracting Officer, the Contractor shall immediately proceed with the following obligations, regardless of any delay in determining or adjusting any amounts due under this clause:

- (1) Stop work as specified in the notice.
- (2) Place no further subcontracts or orders (referred to as subcontracts in this clause) for materials, services, or facilities, except as necessary to complete the continued portion of the contract.
- (3) Terminate all subcontracts to the extent they relate to the work terminated.
- (4) Assign to the Government, as directed by the Contracting Officer, all right, title, and interest of the Contractor under the subcontracts terminated, in which case the Government shall have the right to settle or to pay any termination settlement proposal arising out of those terminations.
- (5) With approval or ratification to the extent required by the Contracting Officer, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts; the approval or ratification will be final for purposes of this clause.
- (6) As directed by the Contracting Officer, transfer title and deliver to the Government
 - (i) the fabricated or unfabricated parts, work in process, completed work, supplies, and other material produced or acquired for the work terminated, and
 - (ii) the completed or partially completed plans, drawings, information, and other property that, if the contract had been completed, would be required to be furnished to the Government.
- (7) Complete performance of the work not terminated.
- (8) Take any action that may be necessary, or that the Contracting Officer may direct, for the protection and preservation of the property related to this contract that is in the possession of the Contractor and in which the Government has or may acquire an interest.
- (9) Use its best efforts to sell, as directed or authorized by the Contracting Officer, any property of the types referred to in subparagraph (b) (6) of this clause; provided, however, that the Contractor
 - (i) is not required to extend credit to any purchaser and
 - (ii) may acquire the property under the conditions prescribed by, and at prices approved by, the Contracting Officer. The proceeds of any transfer or disposition will be applied to reduce any payments to be made by the Government under this contract, credited to the price or cost of the work, or paid in any other manner directed by the Contracting Officer.

(c) The Contractor shall submit complete termination inventory schedules no later than 120 days from the effective date of termination, unless extended in writing by the Contracting Officer upon written request of the Contractor within this 120-day period.

(d) After expiration of the plant clearance period as defined in Subpart 49.001 of the Federal Acquisition Regulation, the Contractor may submit to the Contracting Officer a list, certified as to quantity and quality, of termination inventory not previously disposed of, excluding items authorized for disposition by the Contracting Officer. The Contractor may request the Government to remove those items or enter into an agreement for their storage. Within 15 days, the Government will accept title to those items and remove them or enter into a storage agreement. The Contracting Officer may verify the list upon removal of the items, or if stored, within 45 days from submission of the list, and shall correct the list, as necessary, before final settlement.

(e) After termination, the Contractor shall submit a final termination settlement proposal to the Contracting Officer in the form and with the certification prescribed by the Contracting Officer. The Contractor shall submit the proposal promptly, but no later than 1 year from the effective date of termination, unless extended in writing by the Contracting Officer upon written request of the Contractor within this 1 year period. However, if the Contracting Officer determines that the facts justify it, a termination settlement proposal may be received and acted on after 1 year or any extension. If the Contractor fails to submit the proposal within the time allowed, the Contracting Officer may determine, on the basis of information available, the amount, if any, due the Contractor because of the termination and shall pay the amount determined.

(f) Subject to paragraph (e) of this clause, the Contractor and the Contracting Officer may agree upon the whole or any part of the amount to be paid because of the termination. The amount may include a reasonable allowance for profit on work done. However, the agreed amount, whether under this paragraph (f) or paragraph (g) of this clause, exclusive of costs shown in subparagraph (g)(3) of this clause, may not exceed the total contract price as reduced by (1) the amount of payments previously made and (2) the contract price of work not terminated. The contract shall be amended, and the Contractor paid the agreed amount. Paragraph (f) of this clause shall not limit, restrict, or affect the amount that may be agreed upon to be paid under this paragraph.

(g) If the Contractor and the Contracting Officer fail to agree on the whole amount to be paid the Contractor because of the termination of work, the Contracting Officer shall pay the Contractor the amounts determined as follows, but without duplication of any amounts agreed upon under paragraph (f) of this clause:

(1) For contract work performed before the effective date of the termination, the total (without duplication of any items) of--

(i) The cost of this work;

(ii) The cost of settling and paying termination settlement proposals under terminated subcontracts that are properly chargeable to the terminated portion of the contract if not included in subdivision (g)(1)(i) of this clause; and

(iii) A sum, as profit on subdivision (g)(1)(i) of this clause, determined by the Contracting Officer under 49.202 of the Federal Acquisition Regulation, in effect on the date of this contract, to be fair and reasonable; however, if it appears that the Contractor would have sustained a loss on the entire contract had it been completed, the Contracting Officer shall allow no profit under this subdivision (iii) and shall reduce the settlement to reflect the indicated rate of loss.

(2) The reasonable costs of settlement of the work terminated, including--

(i) Accounting, legal, clerical, and other expenses reasonably necessary for the preparation of termination settlement proposals and supporting data;

(ii) The termination and settlement of subcontracts (excluding the amounts of such settlements); and

(iii) Storage, transportation, and other costs incurred, reasonably necessary for the preservation, protection, or disposition of the termination inventory.

(h) Except for normal spoilage, and except to the extent that the Government expressly assumed the risk of loss, the Contracting Officer shall exclude from the amounts payable to the Contractor under paragraph (g) of this clause, the fair value, as determined by the Contracting Officer, of property that is destroyed, lost, stolen, or damaged so as to become undeliverable to the Government or to a buyer.

(i) The cost principles and procedures of Part 31 of the Federal Acquisition Regulation, in effect on the date of this contract, shall govern all costs claimed, agreed to, or determined under this clause.

(j) The Contractor shall have the right of appeal, under the Disputes clause, from any determination made by the Contracting Officer under paragraph (e), (g), or (l) of this clause, except that if the Contractor failed to submit the termination settlement proposal within the time provided in paragraph (e) or (l), respectively, and failed to request a time extension, there is no right of appeal.

(k) In arriving at the amount due the Contractor under this clause, there shall be deducted--

(1) All unliquidated advance or other payments to the Contractor under the terminated portion of this contract;

(2) Any claim which the Government has against the Contractor under this contract; and

(3) The agreed price for, or the proceeds of sale of, materials, supplies, or other things acquired by the Contractor or sold under the provisions of this clause and not recovered by or credited to the Government.

(l) If the termination is partial, the Contractor may file a proposal with the Contracting Officer for an equitable adjustment of the price(s) of the continued portion of the contract. The Contracting Officer shall make any equitable adjustment agreed upon. Any proposal by the Contractor for an equitable adjustment under this clause shall be requested within 90 days from the effective date of termination unless extended in writing by the Contracting Officer.

(m) (1) The Government may, under the terms and conditions it prescribes, make partial payments and payments against costs incurred by the Contractor for the terminated portion of the contract, if the Contracting Officer believes the total of these payments will not exceed the amount to which the Contractor will be entitled.

(2) If the total payments exceed the amount finally determined to be due, the Contractor shall repay the excess to the Government upon demand, together with interest computed at the rate established by the Secretary of the Treasury under 50 U.S.C. App. 1215(b)(2). Interest shall be computed for the period from the date the excess payment is received by the Contractor to the date the excess is repaid. Interest shall not be charged on any excess payment due to a reduction in the Contractor's termination settlement proposal because of retention or other disposition of termination inventory until 10 days after the date of the retention or disposition, or a later date determined by the Contracting Officer because of the circumstances.

(n) Unless otherwise provided in this contract or by statute, the Contractor shall maintain all records and documents relating to the terminated portion of this contract for 3 years after final settlement. This includes all books and other evidence bearing on the Contractor's costs and expenses under this contract. The Contractor shall make these records and documents available to the Government, at the Contractor's office, at all reasonable times, without any direct charge. If approved by the Contracting Officer, photographs, microphotographs, or other authentic reproductions may be maintained instead of original records and documents.

126. *FAR 52.249-10 DEFAULT (FIXED-PRICE CONSTRUCTION) (APR 1984)

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

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

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

- (i) acts of God or of the public enemy,
- (ii) acts of the Government in either its sovereign or contractual capacity,
- (iii) acts of another Contractor in the performance of a contract with the

Government,

- (iv) fires,
- (v) floods,
- (vi) epidemics,
- (vii) quarantine restrictions,
- (viii) strikes,
- (ix) freight embargoes,
- (x) unusually severe weather, or
- (xi) delays of subcontractors or suppliers at any tier arising from unforeseeable

causes beyond the control and without the fault or negligence of both the Contractor and the subcontractors or suppliers; and

(2) The Contractor, within 10 days from the beginning of any delay (unless extended by the Contracting Officer), notifies the Contracting Officer in writing of the causes of delay. The Contracting Officer

shall ascertain the facts and the extent of delay. If, in the judgment of the Contracting Officer, the findings of fact warrant such action, the time for completing the work shall be extended. The findings of the Contracting Officer shall be final and conclusive on the parties, but subject to appeal under the Disputes clause.

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

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

127. ENVIRONMENTAL LITIGATION (1974 NOV OCE)

(a) If the performance of all or any part of the work is suspended, delayed, or interrupted due to an order of a court of competent jurisdiction as a result of environmental litigation, as defined below, the Contracting Officer, at the request of the Contractor, shall determine whether the order is due in any part to the acts or omissions of the Contractor or a Subcontractor at any tier not required by the terms of this contract. If it is determined that the order is not due in any part to acts or omissions of the Contractor or a Subcontractor at any tier other than as required by the terms of this contract, such suspension, delay, or interruption shall be considered as if ordered by the Contracting Officer in the administration of this contract under the terms of the "Suspension of Work" clause of this contract. The period of such suspension, delay, or interruption shall be considered unreasonable, and an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) as provided in that clause, subject to all the provisions thereof.

(b) The term "environmental litigation," as used herein, means a lawsuit alleging that the work will have an adverse effect on the environment or that the Government has not duly considered, either substantively or procedurally, the effect of the work on the environment.

128. EFARS 52.249-5000 BASIS FOR SETTLEMENT OF PROPOSALS

Actual costs will be used to determine equipment cost for a settlement proposal submitted on the total cost basis under FAR 49.206-2(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 and unallocable 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 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.

129. INAPPLICABLE PROVISIONS AND CLAUSES (Local Provision). [Applicable only for projects or delivery orders less than \$100,000]

This provision applies only to delivery orders and projects less than \$100,000.

Pursuant to Pub. L. 103-355, the following provisions and clauses, as noted below, are inapplicable to this contract:

(a) FAR 28.102-3, Miller Act requirements;

(b) Not Used;

- (c) FAR 52.203-5, Covenant Against Contingent Fees;
- (d) FAR 52.203-6, Restrictions on Subcontractor Sales to the Government;
- (e) FAR 52.203-7, Anti-Kickback Procedures;
- (f) FAR 52.222-4, Contract Work Hours and Safety Standards Act-Overtime Compensation; and
- (g) FAR 52.223-6, Drug-Free Workplace, except for individuals.

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SECTION 00800

SPECIAL CONTRACT REQUIREMENTS
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PART 1 GENERAL

Attachments:

General Wage Decision No NE030001
Appendix A - Contract Document Distribution List

1.1 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984)

The Contractor shall commence work under this contract within ten (10) calendar days after the date of receipt by him of Notice to Proceed, prosecute said work diligently, and complete the entire work except seeding ready for use not later than 730 calendar days after receipt of Notice to Proceed. The time stated for completion shall include final cleanup of the premises. (FAR 52.211-10)

1.1.1 Start Work

Evidence that the Contractor has started procurement of materials, preparation and submission of shop drawings, preparation of subcontracts, and other preparatory work will satisfy the requirement that work commence within ten (10) calendar days after receipt of Notice to Proceed. Therefore, work need not be commenced at the construction site within ten (10) calendar days.

1.1.2 Bald Eagle Impact

There are known bald eagles in the area of this project that restrict project construction. The bald eagle nest is located within .25-mile of the upper end of the levee segment to be constructed. Construction or use of the haul road with in .25 miles of the inhabited nest, will not be allowed during eagle nesting period, February 1 thru August 1, 2005 and 2006. See Section 01355 Environmental Protection, paragraph 3.8.1 for more information, also see the drawings for approximate location.

1.1.3 Migratory Bird Impact

Due to nesting migratory birds, clearing and grubbing for the project will only be allowed from 01 September 2004 to 31 January 2005, and/or 01 September 2005 to 31 January 2006. Clearing and grubbing will not be allowed anywhere on the site outside of these dates, due to nesting of migratory birds. See Section 01355 Environmental Protection, paragraphs 3.8.2 and 3.8.3 for more information.

1.2 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 \$850 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. (FAR 52.211-12)

1.3 EXCEPTION TO COMPLETION TIME AND LIQUIDATED DAMAGES

In case the Contracting Officer determines that seeding, and/or the specified maintenance thereof is not feasible during the construction period, such work will be excepted from the completion time and liquidated damages . This work shall be accomplished during the first seeding, period and the specified maintenance period following the completion date.

1.4 CONTRACT DRAWINGS AND SPECIFICATIONS

1.4.1 SETS FURNISHED

The contractor shall be responsible for making copies of specifications including amendments. The bid drawings as amended shall be utilized in the performance of the work until CD-ROM containing the contract drawings (i.e., bid drawings that have been posted with all amendment changes) are mailed to the Contractor. See paragraph below for contract drawing reproduction and distribution requirements. The work shall conform to the contract drawings, set out in the drawing index, all of which form a part of these specifications. The work shall also conform to the standard details bound or referenced herein.

1.4.2 DRAWING REPRODUCTION AND DISTRIBUTION

The Contractor shall reproduce multiple legible hard copy sets (half-size English unless directed otherwise) of contract drawings from Government provided CD-ROM containing read-only cal file drawings. Within 14 calendar days after receipt of CD-ROM containing read-only cal drawing files, the Contractor shall provide legible hard copy drawing sets to the addressees contained in the Contract Document Distribution List for Project in Appendix A to this specification. The Government will process no progress payments prior to receipt of the legible contract drawings. After receipt and distribution of the legible hard copy drawing sets, the Government will provide the Contractor with a CD-ROM containing editable CAD file drawings (format defined in Section 01040 AS-BUILT DRAWINGS). The Contractor shall prepare as-built drawings as defined in Section 01040 AS-BUILT DRAWINGS.

1.4.3 NOTIFICATION OF DISCREPANCIES

The Contractor shall check all CD-ROM drawing files furnished him immediately upon their receipt and shall promptly notify the Contracting Officer of any discrepancies. Dimensions marked on drawings shall be followed in lieu of scale measurements. Enlarged plans and details shall govern where the same work is shown at smaller scales. All scales shown

are based on a standard drawing size of 28" x 40" . If any other size drawings are furnished or plotted the contractor shall adjust the scales accordingly. The Contractor shall also advise his sub-contractors of the above. The Contractor shall compare all drawings and verify the figures before laying out the work and will be responsible for any errors which might have been avoided thereby.

1.4.4 OMISSIONS

Omissions from the drawings or specifications or the misdescription of details of work which are manifestly necessary to carry out the intent of the drawings and specifications, or which are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details of the work but they shall be performed as if fully and correctly set forth and described in the drawings and specifications.

1.5 PHYSICAL DATA (APR 1984)

Data and information furnished or referred to below is for the Contractors' 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 surveys . The data shown graphically and by symbol for each respective boring represents the actual geologic features observed and logged at the location given on the drawings. While the borings are representative of subsurface conditions at their respective locations and for their respective vertical reaches, local minor variations characteristic of the subsurface materials of this region could occur.

b. Weather conditions shall have been investigated by the Contractor to satisfy himself as to the hazards likely to arise therefrom. Complete weather records and reports may be obtained from the local U.S. Weather Bureau.

c. Transportation facilities shall have been investigated by the Contractor to satisfy himself as to the existence of access highways and railroad facilities. (FAR 52.236-4)

1.6 PAYMENT

1.6.1 PROMPT PAYMENT ACT

Pay requests authorized in CONTRACT CLAUSES clause: "Payments Under Fixed-Price Construction Contracts", will be paid pursuant to the clause, "Prompt Payment for Construction Contracts". Pay requests will be submitted on ENG Form 93 and 93a, "Payment Estimate-Contract Performance" and "Continuation". All information and substantiation required by the identified contract clauses will be submitted with the ENG Form 93, and the required certification will be included on the last page of the ENG Form 93a, signed by an authorized contractor official and dated when signed. The designated billing office is the Office of the Area Engineer.

1.6.2 PAYMENTS FOR MODIFICATIONS

Payments may be made for cost bearing change orders within the scope of the contract only to the extent funds are authorized in the order on a two-part modification. Contractor pricing proposed must be submitted at the earliest possible time after the change order is issued, or at a specific time as directed by the Contracting Officer. At the discretion of the Contracting Officer, any and all payments may be withheld on the modification until the Contractor has submitted a qualifying price proposal, in as much detail as required by the Contracting Officer, and the final price has been agreed.

1.6.3 PAYMENT FOR MATERIALS DELIVERED OFFSITE (MAR 1995)

a. Pursuant to FAR clause 52.232-5, Payments Under Fixed Priced Construction Contracts, materials delivered to the contractor at locations other than the site of the work may be taken into consideration in making payments if included in payment estimates and if all the conditions of the General Provisions are fulfilled. Payment for items delivered to locations other than the work site will be limited to: (1) materials required by the technical provisions; or (2) materials that have been fabricated to the point where they are identifiable to an item of work required under this contract.

b. Such payment will be made only after receipt of paid or receipted invoices or invoices with canceled check showing title to the items in the prime contractor and including the value of material and labor incorporated into the item. Payment for materials delivered off-site includes petroleum products. (List additional items for which payments will be made for off-site delivery.) (EFAR 52.232-5000)

1.7 DAMAGE TO WORK

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

1.8 AVAILABILITY AND USE OF UTILITY SERVICES

Use of public and private utilities will be as found available. The Contractor shall make his own arrangements for use of public and private utilities.

1.9 QUANTITY SURVEYS (APR 1984)

a. Quantity surveys shall be conducted, and the data derived from these surveys shall be used in computing the quantities of work performed and the actual construction completed and in place.

b. The Contractor shall conduct the original and final surveys and surveys for any periods for which progress payments are requested. All these surveys shall be conducted under the direction of a representative of the Contracting Officer, unless the Contracting Officer waives this requirement in a specific instance. The Government shall make such computations as are necessary to determine the quantities of work performed or finally in place. The Contractor shall make the computations based on the surveys for any periods for which progress payments are requested.

c. Promptly upon completing a survey, the Contractor shall furnish the originals of all field notes and all other records relating to the survey or to the layout of the work to the Contracting Officer, who shall use them as necessary to determine the amount of progress payments. The Contractor shall retain copies of all such material furnished to the Contracting Officer. (FAR 52.236.16)

1.10 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER

a. This clause specifies the procedure for the determination of time extensions for unusually severe weather in accordance with the contract clause entitled "Default: (Fixed-Price Construction)." In order for the Contracting Officer to award a time extension under this clause, the following conditions must be satisfied:

(1) The weather experienced at the project site during the contract period must be found to be unusually severe, that is, more severe than the adverse weather anticipated for the project location during any given month.

(2) The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the contractor.

b. The following schedule of monthly anticipated adverse weather delays is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location and will constitute the base line for monthly weather time evaluations. The contractor's progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities.

MONTHLY ANTICIPATED ADVERSE WEATHER DELAY
WORK DAYS BASED ON (5) DAY WORK WEEK

JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
 (16) (10) (04) (05) (07) (07) (05) (07) (04) (03) (02) (11)

c. Upon acknowledgment of the Notice to Proceed (NTP) and continuing throughout the contract, the contractor will record on the daily CQC report, the occurrence of adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical activities for 50 percent or more of the contractor's scheduled work day. The number of actual adverse weather delay days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month), be calculated chronologically from the first to the last day of each month, and be recorded as full days. If the number of actual adverse weather delay days exceeds the number of days anticipated in paragraph b. above, the contracting officer will convert any qualifying delays to calendar days, giving full consideration for equivalent fair weather work days, and issue a modification in accordance with the contract clause entitled "Default (Fixed Price Construction)". (ER 415-1-15)

1.11 INSURANCE REQUIRED

In accordance with CONTRACT CLAUSES clause: "Insurance Work on a Government Installation," the Contractor shall procure the following minimum insurance:

Type	Amount
Workmen's Compensation and Employer's Liability Insurance	\$100,000
General Liability Insurance	\$500,000 per occurrence
Automobile Liability Insurance	
Bodily injury	\$200,000 per person and \$500,000 per occurrence
Property damage	\$ 20,000 per occurrence

(Coverages per FAR 28.307-2)

1.12 SECURITY REQUIREMENTS

1.12.1 Contractor's Employee Identification

The Contractor shall be responsible for furnishing to each employee and for requiring 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 release of any employees. When the contract involves work in restricted security areas, only employees who are U.S. citizens will be permitted to enter. Proof of U.S. citizenship is required prior to entry. When required by the Contracting Officer, the Contractor shall obtain and submit fingerprints of all persons employed or to be employed on the project. (Based on FAR 52.204-2)

1.13 CONTRACTOR QUALITY CONTROL (CQC)

See Section 01451A Contractor Quality Control.

1.14 NONDOMESTIC CONSTRUCTION MATERIALS

The List of nondomestic construction materials or their components included in the list set forth in paragraph 25.104 of the Federal Acquisition Regulation does not apply to the requirements of the contract clause entitled "Buy American Act Construction Materials".

1.15 DAILY WORK SCHEDULES AND WEEKLY COORDINATION MEETINGS

In order to closely coordinate work under this contract, the Contractor shall prepare a written agenda/meeting minutes and attend a weekly coordination meeting with the Contracting Officer and Using Service at which time the Contractor shall submit for coordination and approval, his proposed daily work schedule for the next two week period. The Contractor shall provide a copy of modifications (MODs), Serial Letters, Requests for Information (RFIs) and any other information that is needed in the minutes of the meeting. Required temporary utility services, time and duration of interruptions, and protection of adjoining areas shall be included with the Contractor's proposed 2-week work schedule. At this meeting, the Contractor shall also submit his schedule of proposed dates and times of all preparatory inspections to be performed during the next 2 weeks. Coordination action by the Contracting Officer relative to these schedules will be accomplished during these weekly meetings. Daily reports shall be completed and given to the Contracting Officer or Representative within 24 hours of work

1.16 EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE (MAR 1995)

a. This statement shall become operative only for negotiated contracts where cost or pricing data is requested, and for modifications to sealed bid or negotiated contracts where cost or pricing data is requested. This clause does not apply to terminations. See 52.249-5000, Basis for settlement of proposals and 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 shall 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 of equipment from the Contractor's accounting records, costs for that equipment shall be based upon the applicable provisions of EP 1110-1-8, "Construction Equipment Ownership and Operating Expense Schedule," Region V. Copies of each regional schedule may be obtained through the following Internet site: <http://www.usace.army.mil/inet/usace-docs/eng-pamphlets/ep.htm>. Working conditions shall 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 developed using the formula provided in the schedule. For forward pricing, the

Schedule in effect at the time of negotiations shall apply. For retrospective pricing, the Schedule in effect at the time the work was performed shall apply.

c. Equipment rental costs are allowable, subject to the provisions of FAR 31.105(d)(ii) and FAR 31.205-36. 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 the small purchase threshold, the contracting officer shall request the contractor to submit either certified cost or pricing data, or partial/limited data as appropriate. The data shall be submitted on Standard Form 1411, Contract Pricing Proposal Cover Sheet. (EFARS 52.231-5000)

1.17 AS-BUILT DRAWINGS

See SECTION 01040 - AS-BUILT DRAWINGS

1.18 PERFORMANCE OF WORK BY CONTRACTOR (APR 1984)

The Contractor shall perform on the site, and with its own organization, work equivalent to at least twenty (20) percent of the total amount of work to be performed under the contract. This percentage may be reduced by a supplemental agreement to this contract if, during performing the work, the Contractor requests a reduction and the Contracting Officer determines that the reduction would be to the advantage of the Government. (FAR 52.236-1)

1.19 PROFIT

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

Factor	Rate	Weight	Value
Degree of Risk	20	See Item	
Relative difficulty of work	15	b. below	
Size of Job	15		
Period of performance	15		
Contractor's investment	5		
Assistance by Government	5		
Subcontracting	25		
	100		

b. Based on the circumstances of each procurement action, each of the above factors shall be weighted from .03 to .12 as indicated below. The value shall be obtained by multiplying the rate by the weight. The value column when totaled indicates the fair and reasonable profit percentage

under the circumstances of the particular procurement.

(1) Degree of Risk. Where the work involves no risk or the degree of risk is very small, the weighting should be .03; as the degree of risk increases, the weighting should be increased up to a maximum of .12. Lump sum items will have, generally, a higher weighted value than the unit price items for which quantities are provided. Other things to consider: the portion of the work to be done by subcontractors, nature of work, where work is to be performed, reasonableness of negotiated costs, amount of labor included in costs, and whether the negotiation is before or after performance of work.

(2) Relative Difficulty of Work. If the work is most difficult and complex, the weighting should be .12 and should be proportionately reduced to .03 on the simplest of jobs. This factor is tied in to some extent with the degree of risk. Some things to consider: the nature of the work, by whom it is to be done, where, and what is the time schedule.

(3) Size of Job. All work not in excess of \$100,000 shall be weighted at .12. Work estimated between \$100,000 and \$5,000,000 shall be proportionately weighted from .12 to .05.

(4) Periods of Performance. Jobs in excess of 24 months are to be weighted at .12. Jobs of lesser duration are to be proportionately weighted to a minimum of .03 for jobs not to exceed 30 days. No weight where additional time not required.

(5) Contractor's Investment. To be weighted from .03 to .12 on the basis of below average, average, and above average. Things to consider: amount of subcontracting, mobilization payment item, Government furnished property, equipment and facilities, and expediting assistance.

(6) Assistance by Government. To be weighted from .12 to .03 on the basis of average to above average. Things to consider: use of Government-owned property, equipment and facilities, and expediting assistance.

(7) Subcontracting. To be weighted inversely proportional to the amount of subcontracting. Where 80 percent or more of the work is to be subcontracted, the weighting is to be .03 and such weighting proportionately increased to .12 where all the work is performed by the Contractor's own forces.

1.20 LABOR CONDITIONS APPLICABLE TO TEMPORARY FACILITIES

It is the position of the Department of Defense that the Davis-Bacon Act, 40 U.S.C. 276a is applicable to temporary facilities such as batch plants, sandpits, rock quarries, and similar operations, located off the immediate

site of the construction but set up exclusively to furnish required materials for a construction project on the site of the work. Clause "Payrolls and Basic Records" of the CONTRACT CLAUSES is applicable to such operations.

1.21 DRAWING SCALES

All scales shown are based on a standard drawing size of 28" x 40" . If any other size drawings are furnished or plotted, the contractor shall adjust the scales accordingly. The Contractor shall also advise his sub-contractors of the above.

1.22 WAGE RATE APPLICATION

For copies of Wage Rates, See Attachment GENERAL WAGE DECISIONS.

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

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

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

Goals for Minority Participation for Each Trade *****	Goals for Female Participation for Each Trade *****
5.3	6.9

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

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

against the total work hours performed.

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

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

(e) As used in this Notice, and in any contract resulting from this solicitation, the "covered area" is Omaha, NE, EA-146, of which Saunders County, NE, is a part.

1.24 (EFARS 52.236-5000) PLANT AND MATERIAL REMOVAL AFTER CONTRACT TERMINATION(MAR 1995)

Should this contract be terminated as provided in clause 52.232-5001 because of the failure of Congress to provide additional funds for its completion, the contractor may be permitted to remove plant and material on which payments for preparatory work have been made, subject to an equitable deduction from the amounts due the contractor to reimburse the United States for the unabsorbed value of such plant and material.

1.25 FEDERAL HOLIDAYS

The following Federal legal holidays are observed by this installation:

New Year's Day	1 January
Martin Luther King's Birthday	Third Monday in January
President's Day	Third Monday in February
Memorial Day	Last Monday in May
Independence Day	4 July
Labor Day	First Monday in September
Columbus Day	Second Monday in October
Veterans Day	11 November
Thanksgiving Day	Fourth Thursday in November
Christmas Day	25 December

If a wage determination applies the number of holidays specified on it, it has priority over this clause.

PART 2 NOT USED

PART 3 NOT USED

-- End of Section --

General Decision Number: NE030001 07/02/2004 NE1

Superseded General Decision Number: NE020001

State: Nebraska

Construction Types: Heavy and Highway

Counties: Douglas, Sarpy, Saunders and Washington Counties in Nebraska.

HEAVY CONSTRUCTION PROJECTS (does not include water well drilling); HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects, and railroad construction; bascule, suspension & spandrel arch bridges; bridges designed for commercial navigation; bridges involving marine construction; other major bridges) SAUNDERS COUNTY (EAST OF HWY. #109 EXTENDED NORTH AND SOUTH TO THE COUNTY LINE)

Modification Number	Publication Date
0	06/13/2003
1	02/27/2004
2	03/05/2004
3	04/16/2004
4	05/14/2004
5	05/21/2004
6	05/28/2004
7	06/18/2004
8	06/25/2004
9	07/02/2004

CARP0444-002 06/01/2004

	Rates	Fringes
Carpenter; piledriver.....	\$ 21.31	6.88

* ELEC0022-002 06/01/2004

DOUGLAS AND SARPY COUNTIES; SAUNDERS COUNTY (east of Hwy. #109 and north of U.S. Alternate Highway No. 30 (Route 92)); AND WASHINGTON COUNTY:

	Rates	Fringes
Electrician.....	\$ 26.52	9.25+4%

ELEC0265-001 07/01/2003

SAUNDERS COUNTY (east of Hwy. #109 and south of U.S. Alternate Hwy. No. 30 (Route 92)):

	Rates	Fringes
Electricians:		
Zone 1.....	\$ 21.36	4.5% + 6.55

Zone 2.....	\$ 21.66	4.5% + 6.55
Zone 3.....	\$ 21.96	4.5% + 6.55
Zone 4.....	\$ 22.36	4.5% + 6.55

ZONE DEFINITIONS:

- Zone 1: 0 to 35 miles from the main Post Office in Lincoln,
- Zone 2: 36 to 50 miles from the main Post Office in Lincoln, NE
- Zone 3: 51 to 75 miles from the main Post Office in Lincoln, NE
- Zone 4: 76 miles and over from the main Post Office in Lincoln, NE

FOOTNOTE:

Work on scaffolds, hanging scaffolds, boatswains chairs or ladders, etc., in any area where the worker is in a position to fall 40 ft. or more, or where objects above the worker can fall 40 ft. or more: to be paid one and one-half times the straight- time rate of pay.

ZONE DEFINITIONS:

- Zone 1: 0 to 35 miles from the main Post Office in Lincoln, NE
- Zone 2: 36 to 50 miles from the main Post Office in Lincoln, NE
- Zone 3: 51 to 75 miles from the main Post Office in Lincoln, NE
- Zone 4: 76 miles and over from the main Post Office in Lincoln, NE

ELEC1525-001 01/01/2002

LINE CONSTRUCTION:

	Rates	Fringes
Line technicians:		
Cable splicer; Line welder..	\$ 24.59	27.75%+2.45
Ground person.....	\$ 14.80	27.75%+2.45
Line equipment operator.....	\$ 20.53	27.75%+2.45
Line technician.....	\$ 22.87	27.75%+2.45
Truck driver.....	\$ 16.42	27.75%+2.45

ELEC1525-002 09/01/2000

	Rates	Fringes
Traffic signal, street light and underground work:		
Cable splicer; Line welder..	\$ 23.64	27.75%+2.00
Equipment operator.....	\$ 19.74	27.75%+2.00
Ground person.....	\$ 14.23	27.75%+2.00
Line technician.....	\$ 21.99	27.75%+2.00
Truck driver.....	\$ 15.79	27.75%+2.00

ENGI0571-003 05/01/2004

	Rates	Fringes
Power equipment operators:		
Off-road heavy hauler, Rough Roller dozer, rough blade, Ferguson-type tractors (Workbull with high tecco), asphalt roller.	\$ 17.66	6.60
Oiler, greaser, air compressor, welding machine, pump, roller, forklift, hydrohammer, pug mill, concrete pump, cure and tyne machine, rubber- tired farm tractor.....	\$ 13.99	6.60
One and two drum hoists, tugger, trencher, concrete spreader & finishing machine, dozer loader, spread oiler, bantam-type tamper, rubber-tired tractor backhoe, oil distributor-finish roller dozer.....	\$ 19.21	6.60
Trimmer, crane, backhoe, mechanic, slip form paver, asphalt plant-concrete plant, laydown machine, concrete pump truck, finish blade, scraper.....	\$ 19.93	6.60

FOOTNOTES:

Operation of an articulating, Pitman type boom truck with single axle truck and lift capacity of less than 5,000 lbs., used to put construction materials in place: 90% of the group 2 rate.

When two (2) scraper units or two push cat units capable of operating separately are hooked together in tandem for single operation, the operator shall receive twenty-five cents (\$0.25) over the classification worked.

When air compressors are used for operating the hammer when pulling or driving pile and the compressor operator is required to operate the air valve for such hammer, such compressor operator shall receive the top wage rate.

Operators working in tunnels and caverns under compressed or free air shall receive forty cents (\$0.40) above their classification.

Hazardous waste removal work requiring the wearing of personal protective equipment and/or suits, to be paid as follows:

- Class A: \$3.00 additional per hour
- Class B: 2.00 additional per hour
- Class C: 1.00 additional per hour

Class D: no premium pay.

IRON0021-003 06/01/2003

	Rates	Fringes
Ironworker.....	\$ 22.70	7.02

LABO1140-001 06/01/2004

DOUGLAS and SARPY COUNTIES; SAUNDERS COUNTY (east of Hwy. #109)

	Rates	Fringes
Laborer		
Form setter, pre-cast manhole setter, inlet builder.....	\$ 15.59	6.35
General Laborer.....	\$ 14.86	6.35
Mortar mixer, Concrete saw operator, Pipelayer and Chain saw operator.....	\$ 15.15	6.35

LABO1140-003 06/08/2002

WASHINGTON COUNTY

	Rates	Fringes
Laborers:		
Form setter, pre-cast manhole setter, inlet builder.....	\$ 13.05	3.90
General Laborer.....	\$ 12.30	3.90
Mortar mixer, concrete saw operator, pipelayer, and chain saw operator.....	\$ 12.59	3.90

PAIN0081-010 06/01/2002

	Rates	Fringes
Painter.....	\$ 19.41	3.77

FOOTNOTES:

Work performed above 75 ft. on suspended staging: \$.50 per hour additional.

Spray machine operator: \$.50 per hour additional.

Nozzle operator for sandblasting and waterblasting (waterblasting more than 10,000 PSI) (including all side arm grinder operators engaged in removing paint or preparing for painting): \$.50 per hour additional.

SUNE1988-001 12/20/1988

	Rates	Fringes
Cement Mason.....	\$ 13.62	3.00

SUNE1993-001 08/05/1993

	Rates	Fringes
Sprinkler Installer (lawn).....	\$ 5.15	

TEAM0554-001 01/01/2003

	Rates	Fringes
Truck drivers:		
Low boy driver.....	\$ 16.72	4.40
All other work.....	\$ 15.47	4.40

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

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

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

WAGE DETERMINATION APPEALS PROCESS

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

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.)

and 3.) should be followed.

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

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

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

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

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

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

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

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

=====

END OF GENERAL DECISION

Civil Works (Ft Crook Area)

rev.19Juy02

Contractor Distribution List for Project

Name: Vincent C. Turner
Location: Camp Ashland, NE
Sol. No. : W9128F-04-B-0017
P.M.:V. Turner Ext: 4561

Contractor shall reproduce multiple hardcopy sets of contract drawings from government provided CD Rom. Drawings shall be forwarded to addresses listed below.

Address	Full Size	Half Size
Fort Crook Area Office U.S. Army Corps of Engineers P.O. Box 13287 Offutt AFB, NE 68113	1	2
Offutt Resident Office U.S. Army Corps of Engineers P.O. Box 13287 Offutt AFB, NE 68113	1	2
Nebraska Resident Office U.S. Army Corps of Engineers P.O. Box 13287 Offutt AFB, NE 68113	1	2
U.S. Army Corps of Engineers Attn: CENWO-CT (D. Boganowski) 106 South 15th Street Omaha, Nebraska 68102-1618	0	10
Total Copies:	<hr/> <hr/> 3	<hr/> <hr/> 16
	Full Size	Half Size

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01040

AS-BUILT DRAWINGS

05/04

PART 1 GENERAL

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- 1.1.2 As-Built Drawings
- 1.1.3 Black-Line Drawings
- 1.1.4 Full-Size Drawings
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SECTION 01040

AS-BUILT DRAWINGS
05/04

PART 1 GENERAL

1.1 DEFINITIONS

The definitions listed below form a part of this specification.

1.1.1 Red-Line Drawings

Contract drawings marked-up to show actual work performed to include necessary sketches, modification drawings, shop drawings and notes. Green ink is used to indicate work deleted from the contract. Red ink is used for additions and deviations from the contract.

1.1.2 As-Built Drawings

Professional finished bond paper drawings and Electronic CADD files developed from the original contract drawings that include all of the information from the redline drawings and suitable for half-size reproduction.

1.1.3 Black-Line Drawings

Paper drawings reproduced from electronic CADD files or high quality reproducible drawings.

1.1.4 Full-Size Drawings

28 inches x 40 inches nominal size drawings with all details visually readable.

1.1.5 Modification Circle

A circle with a horizontal line through the center. The top half will contain the letter "P" with the bottom half containing the Modification number. The lettering standard will be 1/8-inch (Microstation) Font 1 WORKING.

1.1.6 Electronic CADD Files

Electronic CADD files are files saved on CD-ROM in accordance with appropriate CADD standard. The CADD standard will include level on/off status, special characters, line weights, font, and size requirements.

1.2 GENERAL REQUIREMENTS

The work includes creation of bond paperelectronic CADD files on

Microstation J for as-built drawings to accurately depict existing conditions of the project. As-Built Drawings will become the permanent record drawings of the construction. The Contractor is responsible for development of electronic CADD files in accordance with Omaha District CADD standards Omaha District Microstation CADD Standards, which includes Microstation and Adobe Acrobat files regarding blocks, cells, fonts, standard drawings and standards, will be made available to the successful bidder. The Contractor shall be responsible for furnishing the required CAD software. The Omaha District will furnish a CD of CAD (read-write) contract drawing files in the software language specified in paragraph Procedure below. This is the software language required by the Using Service. These drawing files shall be used to prepare required As-Built drawings. The As-Built drawings shall include all major features of the work and all details to the same level as the original contract set of drawings. All changes from the contract drawings, including but not limited to all deviations, additional information, and modifications to the contract shall be shown on the as-builts. Where contract drawings or specifications allow for options, only the option selected and actually constructed shall be shown on the As-Built Drawings. Systems designed or enhanced by the Contractor such as HVAC control system, fire alarm system fire sprinkler system, irrigation sprinkler system, and letters of clarification, shall be accurately and neatly recorded on the As-Built Drawings using the same symbols, terminology, and general quality as the original set of contract drawings. All sheets affected by a change shall be revised. The transmittal requirements for the As-built Drawings shall be shown as events on the Contractor prepared project schedule.

1.3 PAYMENT

In accordance with the clause "Payment Under Fixed - Price Construction Contracts", which provides for progress payments on estimates of work accomplished (which meets the standards of quality established under the contract), \$15,250 will be withheld from payment for the creation of As-Built drawings until the final as-built drawings are delivered to the Contracting Officer (including any necessary revisions and subject to the approval of the Contracting Officer).

The Government will assign the Contractor a performance rating (CCASS for Corps of Engineers projects) upon completion of the project. The timeliness of satisfactory As-Built drawing submittals will be an important factor in determining the assigned rating. An unsatisfactory performance of As-Built drawings creation will be given to the Contractor if the Contractor demonstrates an unwillingness to work with the Government on As-Built drawing creation or the Contractor fails to submit satisfactory Final As-Built drawings within 60 calendar days of turning the completed project over to the Using Service. If satisfactory As-Built drawings are not received within 120 days of turning the project over to the Government, the Government will utilize the funds withheld to complete the As-Builts.

1.4 TRANSMITTAL OF AS-BUILT DRAWINGS

1.4.1 Preliminary As-Built Drawings

The Contractor shall produce Preliminary As-Built Drawings indicating

as-built conditions on Microstation J with "clouding". The Contractor shall contact Jim Janicek at (402)221-4519 before beginning As-Built preparation. As-Built preparation process is provided in paragraph As-Built Preparation below. Preliminary drawings shall consist of 15 percent of total project drawings. These drawings shall be sheets used for the construction of this project (excludes Cover Sheet, Vicinity Map, Location Plan and Indexes). The As-Built CADD files which include all changes up to the time Preliminary Drawings shall be sent as stated below. The Contractor shall draw attention to all drawing changes by "clouding" the affected area. This "clouding" shall be accomplished on layer 63 of the drawing file. The Preliminary Drawings shall consist of one (1) set of CADD files on a CD-ROM and one (1) full-size set of the Black-Line Drawings. One (1) set of CADD files on a CD-ROM shall be submitted to the Omaha District Office (ATTN: CENWO-ED-DI, Jim Janicek). In conjunction with this submission, one (1) full-size set of the Black-Line Drawings shall be submitted to the COR. Both documents shall be submitted three (3) weeks prior to the final acceptance inspection unless otherwise directed by the COR. The COR will notify the Contractor in writing of approval / disapproval. The Contractor shall not submit the Final Drawings until he receives the COR's letter approving the Preliminary Drawings.

1.4.2 Final As-Built Drawings

The Contractor shall produce Final As-Built Drawings in Microstation J without "clouding". The As-Built preparation process is provided in paragraph As-Built Preparation below. The Final Drawings shall include all changes. The Final Drawings in the form of a CD-ROM shall be submitted to the COR and Omaha District Office (CENWO-ED-DI) no earlier than the day of acceptance of the project and no later than thirty (30) days after the date on the acceptance letter for the Preliminary Drawing unless otherwise directed by the COR. (Note: Final drawings shall not be forwarded to the customer. Corps of Engineers, Omaha District COR will forward to the customer after Quality Review.) Contractor shall submit one (1) set of CADD files on a CD-ROM to the Omaha District Office (ATTN: CENWO-ED-DI, Jim Janicek). Contractor shall send the following documents to the COR:

a) One (1) set of CADD files on CD-ROM (folder name containing as-built files shall be designated "AS-BUILTS" on each CD-ROM). Both CD case and CD-ROM shall contain the name of the project, location, specification number, and contract number, and words "As-Built Record Set"). The folder shall contain drawings, indexes and X-REF files related to all as-builts.

b) One (1) full-size set of bond paper As-Built Drawings, along with All red-lined hard copy drawings prepared by the Contractor during construction.

COR will forward one (1) full-size set of drawings along with CD-ROM to the customer.

1.4.3 As-Built Preparation

Both preliminary and final electronic as-built drawings shall be produced in accordance with the following process for MicroStation drawings:

1.4.3.1 For Microstation (*.DGN.) Files

- a. When opened, the drawing shall be seen exactly as it should be plotted.
- b. Only one view port is open in the file.
- c. The view shall be zoomed to fit the border.
- d. All information in the title block shall be filled in, including plot scale.
- e. The information in the title block shall be correct, including the design file name and the plot scale.
- f. All files shall reference a MicroStation border supplied by the Omaha District.
- g. Detach all unused reference files.
- h. For Microstation J only: For any half tone references, the logical name shall have common first or last character(s). Preferably use "_xxx" at the end of the logical name. Include this information with the pertinent information.
- i. All unnecessary information outside the border shall be deleted.
- j. All files shall be compressed.
- k. The font resource file used shall be included with the set, even if it is the standard MicroStation font resource.
- l. An ASCII text file shall be provided with the following information:
reference file paths that should be added to MS_RFDIR, the name of your font resource file, the name and phone number of the person we need to contact if we have problems, and the version of MicroStation used to create and/or work on the drawings.

1.4.3.2 Not Used

1.5 PROCEDURE

Upon award of this contract, one (1) CD-ROM containing the contract drawings (read-write CADD files) and CADD standards in Microstation J format, for use in the preparation of As-Built Drawings by the Contractor, will be forwarded to the Resident Engineer. This CD-ROM will then be furnished to the Contractor after signed receipt to the Resident Engineer. The Contractor shall utilize this CD-ROM to create a set of electronic Cadd files and full-size Red-Line Drawings to fully indicate As-Built conditions. The Red-Line Drawings shall be maintained at the site, in a current condition until the completion of the work and shall be available for review by the COR at all times. All as-built conditions shall be on the Red-Line Drawings within two (2) days after the work activity is completed or shall be entered on the deficiency tracking system (see Section 01451A, CONTRACTOR QUALITY CONTROL). The Contractor shall not convert electronic drawing files from one software language to another (i.e. Microstation to AutoCADD or AutoCADD to Microstation).

1.6 TITLE BLOCKS

The contract number and the specification number (if available) shall be shown on all sheets. "RECORD DRAWING" shall be added below the title block on all sheets. All modifications to the contract shall be posted in

ascending order. The top line of the revision box shall state "REVISED TO SHOW AS-BUILT CONDITIONS" and dated. All modifications to all plans, sections, or details, shall have a modification number placed in the revision box under column entitled "Symbol". The statement "GENERAL REVISIONS" may be used when applicable. The date to be added in the revision box for modifications is found in Block 3 of Form SF-30. Cover Sheet will have Contract Award Set changed to As-Built Record Set with month & year completed. Month and year completed will also go in the date box in the title block. There will be no separate dates.

1.7 PROCEDURES FOR POSTING MODIFICATION CHANGES TO DRAWINGS

Follow directions in the modification for posting descriptive changes.

A Modification Circle shall be place at the location of each deletion.

The highest modification number on the sheet should be shown in the modification circle in the "DATE" and "DRAWING CODE" boxes of the title block.

For all new details or sections that are added to a drawing, place a Modification Circle by the detail or section title.

For changes to a drawing, place a Modification Circle by the title of the affected plan, section or detail titles (each location).

For changes to schedules on drawings, a Modification Circle shall be placed either by the schedule heading or by the change in the schedule.

The Modification Circle size shall be 1/2-inch diameter unless the area where circle is to be placed is crowded. Use smaller size circle for crowded areas.

1.8 WORD ABBREVIATIONS

Abbreviations shown on the abbreviation sheet shall be used to describe all work items. Additional word abbreviations, not found on the abbreviation sheet but necessary to describe the work, shall be properly identified and incorporated with the other standard word abbreviations.

1.9 LEGEND SHEETS

Symbols, which conflict with those on the original contract legend sheet, shall not be used. Additional symbols, necessary to depict any additional work items, shall be properly identified and added to the legend sheet or supplemental legend. Those projects that do not have legend sheets may use supplemental legends on each sheet where symbol is shown.

1.10 CONTRACTOR SHOP DRAWINGS

Contractor shop drawings, which supersede data on the contract plans and/or additional drawings, prepared by the Contractor, shall be incorporated into the As-Built Drawings. Design plans prepared by Contractor shall include the designer's name on the As-Built Drawings.

1.11 INDEXING OF DRAWINGS

If drawings are added to the portfolio of drawings to depict as-built conditions, the index of drawings shall be revised accordingly.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 GENERAL

As-Built drawings shall include as-built information to the same level of detail as shown on the original details, unless otherwise specified. The Contractor shall provide any additional full-size drawings as required to display all the details.

3.2 SITE WORK

3.2.1 Utilities

All utilities shall be shown whether active, inactive, shown on the original contract drawings, or found on-site. The type of utility, location, general direction, size, material make-up and depth shall be shown. The location and description of any utility line or other installations of any kind known to exist within the construction area shall be shown. The location shall include dimensions to permanent features.

3.2.2 Structures

Structures above and below ground shall be shown. The size, material make-up, location, height, and/or depth shall be shown. Manholes shall show rim elevation and invert elevations as applicable. Power poles shall show electrical equipment and voltage rating.

3.2.3 Grades

Grade or alignment of roads, structures, or utilities shall be corrected if any changes were made from the contract drawings. Elevations shall be corrected if changes were made in site grading.

3.3 STRUCTURAL

3.3.1 Steel/Concrete

Shop drawings that deviate from the contract drawings shall be incorporated in the As-Built Drawings.

-- End of Section --

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SECTION 01200

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5/00; Rev 02/02

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PART 2 NOT USED

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SECTION 01200

CONSTRUCTION GENERAL
5/00; Rev 02/02

PART 1 GENERAL

1.1 SCOPE

The work covered in this section is outlined as a statement of construction requirements common to all the work. Specific requirements for materials and installations are provided under the Technical Sections herewith. No claims for extras shall be made on account of items presumed to have been omitted from this section.

1.2 CONSTRUCTION RIGHT-OF-WAY

The Contractor will be assigned working areas or working right-of-way limits for use in the prosecution of work under this contract, subject to the CONTRACT CLAUSES clause entitled "Operations and Storage Areas."

1.3 PROTECTION OF EXISTING FACILITIES AND WORKS

The Contractor shall be responsible for the protection of the work area from damage and upon completion of the work shall leave existing works in a condition equal to that which existed when the work started. All work, storage of materials, and construction plant shall be kept within the limits of the areas assigned. Prior to construction operations, the Contractor shall confer with the Contracting Officer's representative to determine the proximity of any possible under-ground obstructions, pipe or equipment which could be damaged as a result of construction operations. Existing utility lines that are shown on the drawings or the locations are otherwise made known to the Contractor shall be protected from damage, and if damaged, shall be repaired by the Contractor at no additional expense to the Government. In the event that the Contractor damages any existing utility lines that are not shown or the locations of which have not been made known to the Contractor, report thereof shall be made immediately to the Contracting Officer. If the Contracting Officer determines that repairs shall be made by the Contractor, such repairs will be ordered under CONTRACT CLAUSES clause entitled "Changes." The Contractor will be responsible for the protection of structures from any structural damage during the construction operations. Roads and surfaces shall be protected from damage by the work or if damaged shall be repaired with equal materials at no additional expense to the Government. At all times the plant and work areas shall be kept in a condition conducive to safety of workmen and the public and neat in appearance. Waste or surplus materials shall not be allowed to accumulate in the construction areas.

1.3.1 Protection of Appurtenances from Bituminous Material Applications

It shall be the responsibility of the Contractor to cover and protect the surfaces of roadway appurtenances, structures and installations by approved methods in advance of any bituminous material application adjacent thereto.

Damages or defacement thereof shall be corrected as directed, by and at the expense of the Contractor.

1.3.2 Flood Protection Works

In all cases where materials in the existing flood protection works are used or connected with the construction of new work under this contract, the work shall be so planned and executed that the new work shall be completed to provide protection equivalent to the existing protection as the existing protection is weakened or removed. These operating restrictions shall be followed in order that the new work may be tied in, or connected promptly, by the Contractor, with the existing facilities so as to furnish a continuous service in an emergency. These ties or connections shall be made during periods of suspended construction operations and the Contractor shall leave incompletd pipe outlets and other structures in such conditions as to not interfere with the natural drainage from areas served by these pipes or structures.

1.4 CARE OF WATER

Full responsibility for care of water shall be borne by the Contractor until completion of work under this contract. The Contractor shall provide the materials and equipment and perform all work necessary to facilitate construction and to protect the work from damage by water. The Contractor shall make his own investigations and determinations of conditions, both existing and anticipated concerning care of water. Plans for care of water are subject to approval by the Contracting Officer prior to construction. Facilities shall be removed upon completion of the work.

1.5 DISPOSITION OF CONSTRUCTION FACILITIES

All buildings and facilities constructed by the Contractor shall be maintained in a satisfactory condition with strict observance of the rules of sanitation, safety and order as may be established by the Contracting Officer. Prior to final payment under the contract, all buildings and facilities constructed by the Contractor for his own use shall be removed from the site by the Contractor.

1.6 ACCESS ROADS AND HAUL ROADS

1.6.1 Access Roads

Access roads as required for the prosecution of the work shall be maintained (including sprinkling for dust control, safety personnel, signals and control) within the work areas assigned to the Contractor. Consideration shall be given to the avoidance of interference with others, safety and frequency of traffic, subject to review and approval prior to construction. Access road areas shall be restored to their original or suitable condition upon completion of this contract. The Contractor shall be responsible for repair of damage to existing roads caused by his operation.

1.6.2 Haul Roads

The Contractor shall construct haul roads as may be necessary for the conduct of the work without additional cost to the Government. The Contractor shall arrange his hauling operations so as to cause a minimum interference with traffic and shall furnish flagmen and other facilities as required to avoid additional hazards to the public. Lines, grades and widths for haul roads, shall be selected to fulfill the requirements for safe and efficient hauling operations and shall be approved by the Contracting Officer prior to construction. Haul roads shall have ample width to provide safety. Preference shall be given to one-way haul roads when these are feasible. All roads shall be maintained in first class condition during all periods of their use. Roads shall be sprinkled whenever, in the opinion of the Contracting Officer, control of dust is necessary to insure safe movements of construction traffic. Upon completion of work under this contract, roads shall be disposed of as directed by the Contracting Officer. All signs, culverts, guards, fences and other improvements on roads constructed for the Contractor's convenience and operations shall be removed from the project site and shall remain his property. Use and repair of existing roads and bridges shall be subject to the requirements of local authorities. Prior to start of hauling operations on public roads, the Contractor shall furnish written evidence to the Contracting Officer that an agreement has been consummated with State and County officials on the use of public roads and bridges. Such agreements shall clearly relieve the Government of any responsibility for damage resulting from hauling across or on these roads.

1.6.3 Joint Use of Transportation Facilities

The Contractor may use jointly with contractors and others, existing access and haul roads constructed by the Government or by others. Unless otherwise specifically authorized in writing, the Contractor will not be granted exclusive use of any access or haul road whether it be an existing road or one constructed by the Contractor. However, the use by others of roads constructed by or assigned to the Contractor primarily for his own use will be limited by the Contracting Officer to the minimum considered consistent with efficient prosecution of the work under this and other contracts in force. Maintenance of jointly used facilities shall be shared in proportion to use. In the event of a disagreement between this Contractor and others as to the use of any road, the decision of the Contracting Officer shall be final. The Contractor shall not obstruct any existing road on the land controlled by the Government.

1.6.4 Waterway Crossings

The Contractor shall construct approved crossings where hauling is to be done across waterways with adequate openings for drainage and streamflow. Structures for crossings shall be safe for all operating equipment and vehicles and shall be adequate for drainage and flow of the waterway. After haul for construction has ceased, the structures constructed by the Contractor shall be removed and disposed of as directed.

1.6.5 Ramps

Ramps shall be provided and maintained for access of hauling equipment into excavation and waste areas. Locations, grades and width are subject to review and approval by the Contracting Officer prior to construction.

1.7 COOPERATION WITH OTHERS

The Contractor shall cooperate and coordinate his work with that of others as required for orderly completion of all work. In the event of disagreement between the Contractor and others, the decision of the Contracting Officer shall be final.

1.8 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 shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Proposed Methods of Operation; G-AO

Progress Charts; G-AO

Construction Right-of-Way

Right-of-Way Agreements

SD-02 Shop Drawings

Care of Water; G-AO

SD-11 Closeout Submittals

Warranty of Construction

List of warranties with copy of each

1.9 SPECIAL INSTRUCTIONS FOR PROGRESS CHARTS

To be submitted in accordance with the CONTRACT CLAUSES clause entitled "Schedule for Construction Contracts" shall indicate the required data for each of the principal features of the work. Contract changes or modifications will not include extensions of time unless the updated progress chart shows that the contract completion date is delayed due to the affect of the change on one or more principal features of the work.

1.10 WARRANTY OF CONSTRUCTION (MAR 1994)

(a) In addition to any other warranties in this contract, the Contractor warrants, except as provided in paragraph (i) of this clause, that work performed under this contract conforms to the contract requirements and is

free of any defect in equipment, material, or design furnished, or workmanship performed by the Contractor or any subcontractor or supplier at any tier.

(b) This warranty shall continue for a period of 1 year from the date of final acceptance of the work. If the Government takes possession of any part of the work before final acceptance, this warranty shall continue for a period of 1 year from the date the Government takes possession.

(c) The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Government-owned or controlled real or personal property, when that damage is the result of--

(1) The Contractor's failure to conform to contract requirements; or

(2) Any defect of equipment, material, workmanship, or design furnished.

(d) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for 1 year from the date of repair or replacement.

(e) The Contracting Officer shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage.

(f) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the Government shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

(g) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall--

(1) Obtain all warranties that would be given in normal commercial practice;

(2) Require all warranties to be executed, in writing, for the benefit of the Government, if directed by the Contracting Officer; and

(3) Enforce all warranties for the benefit of the Government, if directed by the Contracting Officer.

(h) In the event the Contractor's warranty under paragraph (b) of this clause has expired, the Government may bring suit at its expense to enforce a subcontractor's, manufacturer's, or supplier's warranty.

(i) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defects of material or design furnished by the Government nor for the repair of any damage that results from any defect in

Government-furnished material or design.

(j) This warranty shall not limit the Government's rights under the Inspection and Acceptance clause of this contract with respect to latent defects, gross mistakes, or fraud. (FAR 52.246-21)

1.11 ACCOMMODATIONS FOR GOVERNMENT PERSONNEL

The Contractor shall furnish and maintain an office type trailer for the use of Government inspectors. The trailer shall have a minimum floor space of 200 sq. ft. The trailer shall meet the following requirements: Sufficient blocks to steady the trailer when spotted for use. An entrance near each end with each entrance equipped with a door with fixed window and screen door. Approximately 40 sq. ft. ventilating type of window space with all windows having louvered screens or screens and awnings or venetian blinds. Floors, ceiling and walls to be insulated. Ceiling vents with at least one having an exhaust fan. Varnished plywood interior. Inlaid linoleum covered floors. Ceiling light operated from switch at door. Fluorescent 2-40 watt tube fixtures at each end of trailer. Double electric outlets located near ends of trailer with one exterior weatherproof outlet. Electric 5-gal. water cooler with two plastic bottles. Forced-air central oil or gas heating unit with minimum capacity of 15,000 B.t.u. per hour, thermostatic controlled. Thermostatically controlled 12,000 B.t.u. air conditioning unit. Wardrobe of approximately 48 inch length. Kneehole desk 30" x 32" x 5'0", with 3 drawers on each side of the kneehole; drafting stool, swivel chair with arms, 4 straight-back or folding chairs. Drafting table on shelf with built-in cabinets below. Plan rack capable of holding approximately 75 standard drawings. Five lb. CO2 fire extinguishers. Exterior toilet facilities. The trailer shall be located at the direction of the Contracting Officer. The Contractor shall provide accommodations, janitor service, fuel for light plant and heating facilities, electricity, telephone with answering machine, and water, all at no cost to the Government, except that the Contractor will not be liable for Government long-distance calls. Upon completion of the contract, the trailer shall remain the property of the Contractor and shall be removed from the site of the work.

1.12 PORTABLE TOILETS

Toilet facilities will not be available for Contractor's use. The Contractor shall provide and maintain portable toilets for use by the Contractor's staff. Toilet(s) shall be placed at the location directed by the Contracting Officer. To prevent overturning by high winds, all portable toilets shall be anchored down.

PART 2 NOT USED

PART 3 NOT USED

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SECTION 01330

SUBMITTAL PROCEDURES

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SECTION 01330

SUBMITTAL PROCEDURES
09/01; Omaha Update 02/04

PART 1 GENERAL

Attachments: Submittal Register
ENG Form 4025, Transmittal Form

1.1 CONTRACTOR RESPONSIBILITIES

The Contractor is responsible for total management of his work including scheduling, control, and certification of all submittals. The submittal management system provided in these specifications is intended to be a complete system for the Contractor to use to control the quality of materials, equipment and workmanship provided by manufacturers, fabricators, suppliers and subcontractors. The Contractor shall review each submittal for contract compliance. Submittals that comply will be forwarded to the Government. Submittals that do not conform will be returned to the originator to be corrected. The Submittal Register (ENG Form 4288) will be utilized to log and monitor all submittal activities. No construction or installation activities shall be performed prior to required approvals of applicable submittals. The Contractor shall perform a check to assure that all materials and/or equipment have been tested, submitted and approved during the preparatory phase of quality control inspections.

1.2 SUBMITTAL IDENTIFICATION (SD)

Submittals required are identified by SD numbers and titles as follows:

SD-01 Preconstruction Submittals

Tabular lists showing location, features, or other pertinent information regarding products, materials, equipment, or components to be used in the work.

In addition, the following items are included:

Work plan
Quality control plan
Permits

SD-02 Shop Drawings

Submittals which graphically show relationship of various components of the work, schematic diagrams of systems, details of fabrication, layouts of particular elements, connections, and other relational aspects of the work.

SD-03 Product Data

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

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

SD-04 Samples

Samples, including both fabricated and unfabricated physical examples of materials, products, and units of work as complete units or as portions of units of work.

Physical examples of materials, equipment or workmanship that illustrate functional and aesthetic characteristics of a material or product and establish standards by which the work can be judged. Color samples from the manufacturer's standard line (or custom color samples if specified) to be used in selecting or approving colors for the project.

Field samples and mock-ups constructed on the project site establish standards by which the ensuring 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

Calculations, mix designs, analyses or other data pertaining to a part of work.

SD-06 Test Reports

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

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.

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.

Investigation reports

Daily checklists

Final acceptance test and operational test procedure

SD-07 Certificates

A document, required of the Contractor, or through the Contractor, from a supplier, installer, manufacturer, or other lower tier Contractor, the purpose of which is to confirm the quality or orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel, qualifications, or other verifications of quality.

Statement signed by an official authorized to certify on behalf of the manufacturer of a product, system or material, attesting that the product, system or material meets specified requirements. The statement must be dated after the award of the contract, must state the Contractor's name and address, must name the project and location, and must list the specific requirements which are being certified.

Confined space entry permits.

SD-08 Manufacturer's Instructions

Preprinted material describing installation of a product, system or material, including special notices and material safety data sheets, if any, concerning impedances, hazards, and safety precautions.

SD-09 Manufacturer's Field Reports

Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.

Factory test reports.

SD-10 Operation and Maintenance Data

Data intended to be incorporated in operations and maintenance manuals.

SD-11 Closeout Submittals

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

In addition, the following items are included:

As-built drawings

Special warranties

Posted operating instructions

Training plan

1.3 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

1.3.1 Government Approved

Governmental approval is required for extensions of design, critical materials, deviations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction," they are considered to be "shop drawings." All submittals noted in the technical specifications and Submittal Register as "G-DO", "G-AE" or "G-AO" are subject to Government Approval.

1.3.2 Information Only (FIO)

All submittals not requiring Government approval will be for information only. They are not considered to be "shop drawings" within the terms of the Contract Clause referred to above. The Contracting Officer has the option to review any submittal.

1.3.3 Administrative Submittals

The submittal items listed below are not be included on the Submittal Register (as discussed below). Unless directed otherwise by the Contracting Officer, the following administrative submittals shall be submitted to the Area or Resident (as directed) Office, for acceptance, via a Serial Letter: Quality Control Plans (Section 01451A CONTRACTOR QUALITY CONTROL), Accident Prevention Plans (Section 01400 SPECIAL SAFETY REQUIREMENTS), Environmental Protection Plans (Section 01355A ENVIRONMENTAL PROTECTION) and other submittals as directed by the Contracting Officer. Format for the Serial Letter shall be as directed by the Area or Resident Office.

1.4 APPROVED SUBMITTALS

The Contracting Officer's approval of submittals shall not be construed as a complete check, but will indicate only that the general method of construction, materials, detailing and other information are satisfactory. Approval 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 is responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work. After submittals have been approved by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.5 DISAPPROVED SUBMITTALS

The Contractor shall make all corrections required by the Contracting Officer and promptly furnish a corrected submittal in the form and number of copies specified for the initial submittal. If the Contractor considers any correction indicated on the submittals to constitute a change to the contract, a notice in accordance with the Contract Clause "Changes" shall be given promptly to the Contracting Officer.

1.6 WITHHOLDING OF PAYMENT

Payment for materials incorporated in the work will not be made if required

approvals have not been obtained.

1.7 GENERAL

The Contractor shall make submittals as required by the specifications. The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Units of weights and measures used on all submittals shall be the same as those used in the contract drawings. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Prior to submittal, all items shall be checked and approved by the Contractor's Quality Control (CQC) System Manager and each item shall be stamped, signed, and dated by the CQC System Manager indicating action taken. Proposed deviations from the contract requirements shall be clearly identified. Submittals shall 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. Submittals requiring Government approval shall be scheduled and made prior to the acquisition of the material or equipment covered thereby. Samples remaining upon completion of the work shall be picked up and disposed of in accordance with manufacturer's Material Safety Data Sheets (MSDS) and in compliance with existing laws and regulations.

1.8 SUBMITTAL REGISTER AND ENG FORM 4288 (RMS) SUBMITTAL REGISTER

At the end of this section is a submittal register (submittal form) showing items of equipment and materials for which submittals are required by the specifications; this list may not be all inclusive and additional submittals may be required. The attached submittal register identifies only the submittal section, type of submittal, description of item submitted, paragraph number related to submittal item (section submittal paragraph if none listed), submittal classification (G), and submittal reviewer identifier (DO, AE or AO). Any submittal without a submittal classification and submittal reviewer identifier is considered to be For Information Only (FIO).

The Government will utilize the Submittal Register information - columns (c) thru (f) of the Submittal Forms furnished with this solicitation - to feed the Government Resident Management System (RMS) Software used for tracking construction submittals. The Submittal Register generated by RMS is referred to as ENG Form 4288 (RMS). The Contractor shall maintain an ENG Form 4288 (RMS) for the project in accordance with the attached ENG Form 4288 (RMS) Instructions. The Contractor will be furnished one (1) set of ENG Forms 4288 (RMS) at the preconstruction conference. The Contractor shall complete the appropriate columns as indicated on the attached ENG Form 4288 (RMS) Instructions and return to the Contracting Officer for approval within 20 calendar days after the preconstruction conference. The ENG Form 4288 (RMS) will become a part of the contract after approval. The TRANSMITTAL NUMBER shall be left blank for use later to record the respective transmittal number corresponding to those listed on the transmittal form entitled: "TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT

DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE" (ENG Form 4025). The approved ENG Form 4288 (RMS) will become the scheduling document and will be used to control submittals throughout the life of the contract. The ENG Form 4288 (RMS) and the progress schedules shall be coordinated.

1.9 SCHEDULING

Submittals covering component items forming a system or items that are interrelated shall be scheduled to be coordinated and submitted concurrently. Certifications to be submitted with the pertinent drawings shall be so scheduled. Adequate time (a minimum of 20 calendar days exclusive of mailing time) shall be allowed and shown on the register for review and approval. No delay damages or time extensions will be allowed for time lost in late submittals.

1.10 TRANSMITTAL FORM (ENG FORM 4025)

The sample transmittal form (ENG Form 4025) attached to this section shall be used for submitting both Government approved and information only submittals in accordance with the instructions on the reverse side of the form. These forms will be furnished to the Contractor. This form shall be properly completed by filling out all the heading blank spaces and identifying each item submitted. Special care shall be exercised to ensure proper listing of the specification paragraph and/or sheet number of the contract drawings pertinent to the data submitted for each item.

1.11 SUBMITTAL PROCEDURES

Submittals shall be made as follows:

1.11.1 Procedures

1.11.1.1 "G-DO" Submittals

All items listed as "G-DO" submittals in the various sections or on the Submittal Register shall be mailed directly to the addressee shown below as directed. For each submittal, a completed information copy of the attached transmittal form shall also be mailed to the Area Engineer .

Technical Reviewer

Engineering Division (DO)
Attn: CENWO-ED-DI
U.S. Army Engineer District, Omaha
106 South 15th Street
Omaha, NE 68102-1618

Each required submittal which is in the form of a drawing shall be submitted as seven (7) prints of the drawing. Drawing prints shall be either blue or black line permanent-type prints on a white background or blueprint and shall be sufficiently clear and suitable for making legible copies.

All catalog and descriptive data shall be submitted in seven (7) copies. Catalog cuts and other descriptive data which have more than one model, size, or type or which shows optional equipment shall be clearly marked to show the model, size, or type and all optional equipment which is proposed for approval. Submittals on component items forming a system or that are interrelated shall be submitted at one time as a single submittal in order to demonstrate that the items have been properly coordinated and will function as a unit.

1.11.1.2 "G-AO" and FIO Submittals

Except as noted below, data for all items listed as "G-AO" Submittals in the various sections shall be submitted in five (5) copies to the Area Engineer using the transmittal form. Items not to be submitted in multiples, such as samples and test cylinders, shall be submitted to the Area or Resident Engineer (as directed) accompanied by five (5) copies of the transmittal form.

Except as noted below, data for all items listed as FIO Submittals in the various sections shall be submitted in five (5) copies to the Area Engineer using the transmittal form. Items not to be submitted in multiples, such as samples and test cylinders, shall be submitted to the Area or Resident Engineer (as directed) accompanied by five (5) copies of the transmittal form. The Government has the option to review any FIO submittal.

1.11.1.3 Certificates of Compliance

Each certificate shall be signed by an official authorized to certify in behalf of the manufacturing company and shall 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 shall 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.

1.11.1.4 Purchase Orders

Copies of purchase orders shall be furnished to the Contracting Officer when the Contractor requests assistance for expediting deliveries of equipment or materials, or when requested by the Contracting Officer for the purpose of quality assurance review. Each purchase order issued by the Contractor or his subcontractors for materials and equipment to be incorporated into the project shall (1) be clearly identified with the applicable DA contract number, (2) carry an identifying number, (3) be in sufficient detail to identify the material being purchased, (4) indicate a definite delivery date, and (5) display the DMS priority rating, if applicable.

1.11.1.5 Operation and Maintenance Instructions and/or Manuals

Where required by various technical sections, operations and maintenance

instructions and/or manuals with parts lists included shall be provided by the Contractor in quintuplicate, unless otherwise specified, and shall be assembled in three-ring binders with index and tabbed section divider and having a cover indicating the contents by equipment or system name and project title and shall be submitted for approval to the Contracting Officer 90 days prior to final tests of mechanical and electrical systems, unless otherwise specified. Each operation and maintenance manual shall contain a copy of all warranties and a list of local service representatives required by Section 01200 Warranty of Construction. If field testing requires these copies to be revised, they shall be updated and resubmitted for approval within 10 calendar days after completion of tests. The Operations and Maintenance Instructions and/or Manuals shall be shown as a separate activity on the Contractor prepared construction schedule bar chart or network analysis system.

1.11.2 Deviations

For submittals which include proposed deviations requested by the Contractor, the column "variation" of ENG Form 4025 shall be checked. The Contractor shall set forth in writing the reason for any deviations and annotate such deviations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

1.12 CONTROL OF SUBMITTALS

The Contractor shall carefully control his procurement operations to ensure that each individual submittal is made on or before the Contractor scheduled submittal date shown on the approved "Submittal Register."

1.13 FINAL COPY OF GOVERNMENT APPROVED SUBMITTALS

Upon completion of review of submittals requiring Government approval, the submittals will be identified as having received approval by being so stamped and dated.

1.13.1 "G-DO" Submittals

The drawing print and five (5) sets of all catalog data and descriptive literature and drawing prints will be retained by the Contracting Officer and two (2) sets of catalog data and descriptive literature and drawing prints will be returned to the Contractor.

1.13.2 "G-AO" Submittals

Two (2) copies of "G-AO" submittals for approval will be returned to the Contractor except for samples, test cylinders, and O&M manuals for which two (2) copies of the transmittal form only will be returned to the Contractor.

1.14 INFORMATION ONLY SUBMITTALS

Normally submittals for information only will not be returned. Review by the Contracting Officer is not required on information only submittals.

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

1.15 STAMPS

Stamps used by the Contractor on the submittal data to certify that the submittal meets contract requirements shall be similar to the following. The stamp shall be affixed and filled out on the back of each ENG Form 4025.

<p>CONTRACTOR</p> <p>(Firm Name)</p> <p>_____ Approved</p> <p>_____ Approved with corrections as noted on submittal data and/or attached sheets(s).</p> <p>SIGNATURE: _____</p> <p>TITLE: _____</p> <p>DATE: _____</p>

INSTRUCTIONS
ENG FORM 4288 (RMS)

1. The Contractor shall utilize the ENG Form 4288 (RMS) generated by the Government Resident Management System (RMS) software for tracking construction submittals. The Government will furnish the Contractor a hard copy of the ENG Form 4288 (RMS) at the preconstruction conference. Listed below are the items included on the ENG Form 4288 (RMS) and parties responsible for completing the information required on the ENG Form 4288 (RMS) submittal register. The subparagraph headings below do not correspond to the Submittal Register column headings included in this solicitation.

a. Activity Number: will be provided by the Contractor from his Network Analysis, if required, and when a network analysis is accepted.

b1. Transmittal Number: will be provided by the Contractor on ENG Form 4025 for each transmittal at the time of submission of items to the Government.

b2. Item Number: will be provided by the Government on the ENG Form 4288 (RMS) Submittal Register to be given to the Contractor at the Preconstruction Conference.

c. Specification Paragraph Number: will be provided by the Government from the Submittal Register from column entitled "Specification Paragraph Number".

d. Description of Submittal: will be provided by the Government from the Submittal Register from column entitled "Description of Item Submitted".

e. Type of Submittal: will be provided by the Government from the Submittal Register from column entitled "Type of Submittal" or "Description of Item Submitted".

f. Classification: will be provided by the Government from the Submittal Register from column entitled "Classification". Classification will be GA (Government Approval) or FIO (For Information Only).

g. Reviewer - Office/Name: will be provided by the Government from the Submittal Register from column entitled "Classification" or "Reviewer".

h. Contractor Schedule Dates: the Contractor will provide schedule dates for

"Submit Needed By" (Date the Contractor expects to submit an item. It is the Contractors responsibility to calculate the lead time needed for the government approval. Note if resubmittal is required it is the Contractors responsibility to make all adjustments necessary to meet the contract completion date.)

"Approval Needed By" (date the Contractor can receive approval and still obtain the material by need date.), and

"Material Needed By" (date that the material is needed at the site. If there is a network analysis it should reflect that date on the analysis.)

i. Contractor Action: Includes the following items: "Code" and "Submit to the Corps". These items will be completed by the Contractor. The action codes will be one of the following:

- A - Approved as submitted.
- B - Approved, except as noted.
- G - Other (specify)

j. Government Action: This item includes a Government Action "Code" and "Date" and is reserved for Government use. The Government reserves the right to review any submittal for contract compliance. Receipt of an Action Code "F - Receipt Acknowledged" or failure of the Contractor to receive an Action Code by the Government, does not mean that the submittal is in compliance with the contract requirements. When used by the Government, the action code will be one of the following:

- A - Approved as submitted.
- B - Approved except as noted on drawings.
- C - Approved, except as noted on drawings. Refer to attached ____ sheet resubmission required.
- D - Will be returned by separate correspondence.
- E - Disapproved (See Attached).
- F - Receipt Acknowledged.
- Fx - Receipt acknowledged, does not comply as noted with contract requirements.
- G - Other (specify).

2. Reviewer Abbreviation code will be as follows;

G-DO, G-AE or G-AO - Government Approved
For Information Only - Any submittal without a Government Approved abbreviation code.

INSTRUCTIONS
ENG FORM 4025

1. DATE at the top of form will be the date submitted to the Government which is to be completed by the Contractor.
2. TRANSMITTAL NO. Each new transmittal (i.e. G-DO, G-AO or FIO) shall be numbered consecutively for each specification section in the space provided in "Transmittal No.". This number will be the identifying symbol for each submittal. Example: "15400A-001", "15895A-001" "15895A-002", "16415A-001", etc. For each new submittal or for a resubmittal, the appropriate box must be marked. Resubmittals or supplemental submittals must be designated by their original sequential number followed by an ".1", ".2", etc. for each sequential resubmittal. Example: "15895A-001.1" (previous submittal No. 15895A-001). This will clearly annotate the resubmittal or supplemental submittals as related to the previous submittal.
3. TO: Box will contain the name and address of the office which will review the submittal (as designated by the Contracting Officer).
4. FROM: Box will be the name and address of the Contractor. Contractor is to complete this box.
5. CONTRACT NO. box will contain the Contractors construction contract number (e.g., W9128F-XX-C-XXXX).
6. CHECK ONE box
 - a. CHECK ONE box (for transmittal/ retransmittal) will be completed by the Contractor with one box marked. If a resubmittal is provided last transmittal number will be added.
 - b. CHECK ONE box will be completed by the Contractor with one box marked for the submittal type.
7. SPECIFICATION SECTION NO. box will be completed by the Contractor. The number will be the five digit number found in the specifications. No more than one section will be covered with each transmittal. **No more than one section will be covered with each transmittal.**
8. PROJECT TITLE AND LOCATION box will be completed by the Contractor.
9. Column a, will be completed by the Contractor and will contain a different number for each item submitted in that transmittal. **The item numbers will match the item numbers provided by the Government on the ENG Form 4288 (RMS) Submittal Register. Additional items shall only be submitted if requested by or coordinated with the Contracting Officer's Representative as necessary.**
10. Column b, will be completed by the Contractor. The description of each item on this form will match the descriptions provided on the ENG Form 4288 (RMS) Submittal Register. The Contractor shall submit each submittal register

item all at once on one transmittal if possible. If a submittal register item can not be submitted all at once Contractor should note that in the remarks box.

11. Column c, will be completed by the Contractor. The information will be the appropriate submittal description number as described in this Section or shown on the submittal register (e.g. SD-01, SD-02, etc.).

12. Column d, will be completed by the Contractor. The number of copies will be determined by the Contractor after review of submittal register for the classification of the item and after review of paragraph: SUBMITTAL PROCEDURES of this Section.

13. Column e, will be completed by the Contractor. The Contractor shall state all applicable paragraph numbers.

14. Column f, will be completed by the Contractor. The Contractor shall state all applicable drawing sheet numbers.

15. Column g, will be completed by the Contractor. **Any transmittal without a Contractor action code may be returned by the Government without Government action. The Contractor QC must demonstrate that a review has been conducted by the Contractor.** The action codes will be one of the following:

- A - Approved as submitted.
- B - Approved, except as noted.
- G - Other (specify)

16. Column h, will be completely by the Contractor. A check shall be placed in this column when a submittal is not in accordance with the plans and specifications also, a written statement to that effect shall be included in the space provided for "Remarks".

17. Column i, is reserved for Government use and may or may not be provided. When used by the Government, the action code will be one of the following:

- A - Approved as submitted.
- B - Approved except as noted on drawings.
- C - Approved, except as noted on drawings. Refer to attached ____ sheet resubmission required.
- D - Will be returned by separate correspondence.
- E - Disapproved (See Attached).
- F - Receipt Acknowledged.
- Fx - Receipt acknowledged, does not comply as noted with contract requirements.
- G - Other (specify).

18. REMARKS box: **Provide any information related to Variations. Also, provide any and all remarks that explain any deviations in descriptions, item numbers, additional or supplemental submittal items, etc. It is imperative to clearly communicate what is included on the transmittal and these pertinent 'remarks' can facilitate the review of the transmittal.**

19. Contractor Quality Control Manager must provide name and sign all Eng Form 4025 certifying conformance. **In the space for the name and signature, also include a phone number where the CQC Manager may be reached.**

20. Section II will be completed by the Government. Contractor is not to write in this space.

See reverse side of ENG Form 4025 for additional instructions.

-- End of Section --

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION

Camp Ashland Flood Protection Project, Platte River, NE

CONTRACTOR

A C T I V I T Y N O	T R A N S M I T T A L N O	S P E C I F I C S E C T	D E S C R I P T I O N	P A R A G R A P H G #	C L A S S I F I C A T I O N	C O N T R A C T O R : S C H E D U L E D A T E S			C O N T R A C T O R A C T I O N		A P P R O V I N G A U T H O R I T Y				M A I L E D T O C O N T R A C T O R / A P P R	R E M A R K S			
						S U B M I T	B Y	B Y	A C T I O N	D A T E O F A C T I O N	D A T E R C D F R O M C O N T R	D A T E F W D T O A P P R A U T H	D A T E R C D F R O M O T H E R	D A T E R C D F R O M O T H E R			A C T I O N C O D E	D A T E O F A C T I O N	D A T E R C D F R O M A P P R
	01200		SD-01 Preconstruction Submittals																
			Proposed Methods of Operation		G AO														
			Progress Charts	1.9	G AO														
			Construction Right-of-Way																
			SD-02 Shop Drawings																
			Care of Water	1.4	G AO														
			SD-11 Closeout Submittals																
			Warranty of Construction																
	01355		SD-08 Manufacturer's Instructions																
			Environmental Protection Plan	1.9	G AO														
	01562		SD-05 Design Data																
			Notice of Intent	3.2.1															
			Notice of Start-up of Construction	3.2.2															
			Activity																
			Storm Water Pollution Prevention	3.2.3															
			Plan																
			Notice of Completion of	3.2.5															
			Construction Activity																
			SD-06 Test Reports																
			Records	3.2.4															
	02231		SD-03 Product Data																
			Materials Other Than Salable		G AO														
			Timber																
	02245		SD-09 Manufacturer's Field																
			Reports																
			Initial Sampling and Testing	1.4.3	G AO														

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION

Camp Ashland Flood Protection Project, Platte River, NE

CONTRACTOR

A C T I V I T Y N O	T R A N S M I T T A L N O	S P E C I F I C S E C T	D E S C R I P T I O N	P A R A G R A P H G #	C L A S S I F I C A T I O N	C O N T R A C T O R : S C H E D U L E D A T E S			C O N T R A C T O R A C T I O N		A P P R O V I N G A U T H O R I T Y				M A I L E D T O C O N T R A C T O R / R E M A R K S		
						S U B M I T	B Y	B Y	A C T I O N	D A T E O F	D A T E F R O M	D A T E F R O M	D A T E F R O M	D A T E F R O M		D A T E O F	D A T E F R O M
			Field Gradation	3.3	G AO												
			SD-02 Shop Drawings														
			Precast Concrete Pipe	2.1.8	G DO												
			Precast Concrete Pipe	3.3.2	G DO												
			Flap Gates	3.4													
			Steel and Metal Assemblies	3.1													
			SD-06 Test Reports														
			Precast Concrete Pipe	2.1.8													
			Precast Concrete Pipe	3.3.2													
			Testing	3.7													
			SD-07 Certificates														
			Dewatering	3.2.1.2													
			Water-Filled Pipe Test Procedure		G DO												
			Materials	2.1													
			SD-06 Test Reports														
			Measurement of levee		G AO												
			embankment fill material														
			SD-04 Samples														
			Geotextile	2.1.1	G AO												
			SD-07 Certificates														
			Geotextile	2.1.1	G AO												
			SD-02 Shop Drawings														
			Steel sheet piles:	2.1	G AO												
			SD-07 Certificates														
			Pile pulling method:	3.3.2	G AO												
			Material certificates	1.4.1	G AO												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION						CONTRACTOR											
Camp Ashland Flood Protection Project, Platte River, NE																	
A C T I V I T Y N O	T R A N S M I T T A L N O	S P E C I F I C S E C T	D E S C R I P T I O N	P A R A G R A P H G #	C L A S S I F I C A T I O N	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY				M A I L E D T O C O N T R A C T O R /	R E M A R K S	
						S U B M I T	B Y	B Y	A C T I O N C O D E	D A T E O F A C T I O N	D A T E F R O M	D A T E F R O M	D A T E F R O M	D A T E F R O M			D A T E O F
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
	02457N		Pile driving equipment	1.5.1	G AO												
			SD-11 Closeout Submittals														
			Pile driving record	3.4	G AO												
	02562		SD-03 Product Data														
			Plant, Equipment, and Tools	1.9													
			Job Mix Formula	2.1.1	G DO												
			Mixture Proportions		G DO												
			SD-06 Test Reports														
			Initial Tests	2.4	G AO												
			Contractor Quality Control	3.2.1	G AO												
			Acceptability of Work	3.2.2	G AO												
			Acceptability of Work	3.4.1	G AO												
			SD-07 Certificates														
			Asphalt Cement Binder	2.1.3	G AO												
			Bituminous Tack and Prime Coat	2.2	G AO												
			SD-08 Manufacturer's Instructions														
			Manufacturer's		G AO												
			Recommendations														
	02630		SD-03 Product Data														
			Placing Pipe	3.3													
			SD-07 Certificates														
			Pipeline Testing	3.7													
	02731A		SD-06 Test Reports														
			Sampling and Testing	1.3	G AO												
	02821A		SD-07 Certificates														
			Chain Link Fence	2.1.1													

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION

Camp Ashland Flood Protection Project, Platte River, NE

CONTRACTOR

A C T I V I T Y N O	T R A N S M I T T A L N O	S P E C I F I C S E C T	D E S C R I P T I O N	P A R A G R A P H	G O V E R N M E N T C L A S S I F I C A T I O N	C O N T R A C T O R : S C H E D U L E D A T E S			C O N T R A C T O R A C T I O N		A P P R O V I N G A U T H O R I T Y				M A I L E D T O C O N T R A C T O R / A U T H	R E M A R K S		
						S U B M I T	B Y	B Y	A C T I O N	D A T E O F	D A T E F R O M	D A T E F R O M	D A T E F R O M	D A T E F R O M			D A T E O F	D A T E F R O M
	02921		SD-01 Preconstruction Submittals															
			Equipment															
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			Finished Grade and Topsoil	3.2.1														
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			Surface Erosion Control Material	2.7														
			Pesticides		G AO													
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			Soil Amendments	2.3														
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	03151A		SD-03 Product Data															

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION

Camp Ashland Flood Protection Project, Platte River, NE

CONTRACTOR

A C T I V I T Y N O	T R A N S M I T T A L N O	S P E C I F I C S E C T	D E S C R I P T I O N	P A R A G R A P H G #	G O V E R N M E N T C L A S S I F I C A T I O N	C O N T R A C T O R : S C H E D U L E D A T E S			C O N T R A C T O R A C T I O N		A P P R O V I N G A U T H O R I T Y				M A I L E D T O C O N T R A C T O R / R E M A R K S		
						S U B M I T	B Y	B Y	A C T I O N	D A T E O F A C T I O N	D A T E F R O M C O N T R	D A T E F W D T O A P P R A U T H	D A T E F R O M O T H E R R E V I E W E R	D A T E F R O M O T H E R R E V I E W E R		D A T E O F A C T I O N	D A T E O F A C T I O N
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			Waterstops	2.1.3	G AO												
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			Premolded Expansion Joint Filler Strips	2.1.1	G AO												
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			Reinforcement	3.1	G DO												
			SD-07 Certificates														
			Reinforcing Steel	2.1	G AO												
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TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES OR MANUFACTURE'S CERTIFICATES OF COMPLIANCE	DATE	TRANSMITTAL NO.
---	------	-----------------

SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (This section to be initiated by the Contractor)

TO:	FROM:	CONTRACT NO.	CHECK ONE: <input type="checkbox"/> THIS IS A NEW TRANSMITTAL <input type="checkbox"/> THIS IS A RE-SUBMITTAL OF TRANSMITTAL NO. _____
SPECIFICATION SECTION NO.	PROJECT TITLE AND LOCATION		CHECK ONE: <input type="checkbox"/> FIO G-RE <input type="checkbox"/> G-ED G-AE

ITEM NO.	DESCRIPTION OF ITEM SUBMITTED <i>(Type, size, model, etc.)</i>	MFG. OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO.	NO of COPIES	CONTRACT REFERENCE DOCUMENT		FOR CONTRACTOR USE CODE	VARIATION (SEE #6)	FOR CE USE CODE
				SPEC. PARA.	DWG. SHEET			
a.	b.	c.	d.	e.	f.	g.	h.	i.

REMARKS:	<p>I certify that the above submittal items have been reviewed in detail and are correct and in strict compliance with the contract drawings and specifications except as otherwise stated.</p> <p>_____ NAME, PHONE NUMBER, AND SIGNATURE OF CONTRACTOR QC</p>
----------	---

SECTION II - APPROVAL ACTION

ENCLOSURES RETURNED <i>(List by Item No.)</i>	NAME, TITLE, AND SIGNATURE OF APPROVING AUTHORITY	DATE

INSTRUCTIONS

1. Section I will be initiated by the Contractor in the required number of copies.
2. Each new transmittal shall be numbered consecutively for each specification section in the space provided in "Transmittal No.". This number, in addition to the contract number, will be the identifying symbol for each submittal. Example: "15400A-001", "15895A-001" "15895A-002", "16415A-001", etc. For each new submittal or for a resubmittal, the appropriate box must be marked. Resubmittals must be designated by their original sequential number followed by an ".1", ".2", etc. for each sequential resubmittal. Example: "15895A-001.1" (previous submittal No. 15895A-001).
3. The "Item No." will be the same "Item No." as indicated on ENG FORM 4288-R for each entry on this form.
4. Submittals requiring expeditious handling will be submitted on a separate form.
5. Separate transmittal form will be used for submittals under separate sections of the specifications.
6. A check shall be placed in the "Variation" column when a submittal is not in accordance with the plans and specifications--also, a written statement to that effect shall be included in the space provided for "Remarks".
7. Form is self-transmittal, letter of transmittal is not required.
8. When a sample of material or Manufacturer's Certificate of Compliance is transmitted, indicate "Sample" or "Certificate" in column c, Section I.
9. U.S. Army Corps of Engineers approving authority will assign action codes as indicated below in space provided in Section I, column i to each item submitted. In addition they will ensure enclosures are indicated and attached to the form prior to return to the contractor. The Contractor will assign action codes as indicated below in Section I, column g, to each item submitted.

THE FOLLOWING ACTION CODES ARE GIVEN TO ITEMS SUBMITTED

- | | |
|---|---|
| A -- Approved as submitted. | E -- Disapproved (See attached). |
| B -- Approved, except as noted on drawings. | F -- Receipt acknowledged. |
| C -- Approved, except as noted on drawings.
Refer to attached sheet resubmission required. | FX -- Receipt acknowledged, does not comply
as noted with contract requirements. |
| D -- Will be returned by separate correspondence. | G -- Other (Specify) |

10. Approval of items does not relieve the contractor from complying with all the requirements of the contract plans and specifications.

(Reverse of CENWO-CD-Q SUBMITTAL FORM, IFB-1 (Omaha Version of ENG Form 4025-R))

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SECTION 01355

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10/00

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SECTION 01355

ENVIRONMENTAL PROTECTION

10/00

PART 1 GENERAL

Attachments

Department of the Army Section 404 Authorization (to follow)
State of Nebraska Section 401 Water Quality Certification
Flood Plain Development Permit Application for Saunders County
Fish and Wildlife letter dated July 14, 2004

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. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

- 33 CFR 328 Definitions
- 40 CFR 68 Chemical Accident Prevention Provisions
- 40 CFR 260 Hazardous Waste Management System: General
- 40 CFR 261 Identification and Listing of Hazardous Waste
- 40 CFR 262 Standards Applicable to Generators of Hazardous Waste
- 40 CFR 279 Standards for the Management of Used Oil
- 40 CFR 302 Designation, Reportable Quantities, and Notification
- 40 CFR 355 Emergency Planning and Notification
- 49 CFR 171 - 178 Hazardous Materials Regulations

ENGINEERING MANUALS (EM)

- EM 385-1-1 (1996) U.S. Army Corps on Engineers Safety and Health Requirements Manual

US ARMY CORPS OF ENGINEERS TECHNICAL REPORT

WETLAND MANUAL

Corps of Engineers Wetlands Delineation
Manual Technical Report Y-87-1

1.2 DEFINITIONS

1.2.1 Environmental Pollution and Damage

Environmental pollution and damage is the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the environment aesthetically, culturally and/or historically.

1.2.2 Environmental Protection

Environmental protection is the prevention/control of pollution and habitat disruption that may occur to the environment during construction. The control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

1.2.3 Contractor Generated Hazardous Waste

Contractor generated hazardous waste means materials that, if abandoned or disposed of, may meet the definition of a hazardous waste. These waste streams would typically consist of material brought on site by the Contractor to execute work, but are not fully consumed during the course of construction. Examples include, but are not limited to, excess paint thinners (i.e. methyl ethyl ketone, toluene etc.), waste thinners, excess paints, excess solvents, waste solvents, and excess pesticides, and contaminated pesticide equipment rinse water.

1.2.4 Land Application for Discharge Water

The term "Land Application" for discharge water implies that the Contractor shall discharge water at a rate which allows the water to percolate into the soil. No sheeting action, soil erosion, discharge into storm sewers, discharge into defined drainage areas, or discharge into the "waters of the United States" shall occur. Land Application shall be in compliance with all applicable Federal, State, and local laws and regulations.

1.2.5 Surface Discharge

The term "Surface Discharge" implies that the water is discharged with possible sheeting action and subsequent soil erosion may occur. Waters that are surface discharged may terminate in drainage ditches, storm sewers, creeks, and/or "waters of the United States" and would require a permit to discharge water from the governing agency.

1.2.6 Waters of the United States

All waters which are under the jurisdiction of the Clean Water Act, as

defined in 33 CFR 328.

1.2.7 Wetlands

Wetlands means those areas that are inundated or saturated by surface or ground water 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. Wetlands generally include swamps, marshes, and bogs. Official determination of whether or not an area is classified as a wetland must be done in accordance with WETLAND MANUAL.

1.3 GENERAL REQUIREMENTS

The Contractor shall minimize environmental pollution and damage that may occur as the result of construction operations. The environmental resources within the project boundaries and those affected outside the limits of permanent work shall be protected during the entire duration of this contract. The Contractor shall comply with all applicable environmental Federal, State, and local laws and regulations. The Contractor shall be responsible for any delays resulting from failure to comply with environmental laws and regulations.

1.4 SUBCONTRACTORS

The Contractor shall ensure compliance with this section by subcontractors.

1.5 PAYMENT

No separate payment will be made for work covered under this section. The Contractor shall be responsible for payment of fees associated with environmental permits, application, and/or notices obtained by the Contractor. All costs associated with this section shall be included in the contract price. The Contractor shall be responsible for payment of all fines/fees for violation or non-compliance with Federal, State, Regional and local laws and regulations.

1.6 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 shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-08 Statements

Environmental Protection Plan; G-AO

The environmental protection plan.

1.7 CERTIFICATION REQUIREMENTS

An environmental agency may require design and construction documents to be

certified by a Professional Engineer (PE) registered in the State of Nebraska. The Contractor shall comply with the certification requirements of the environmental regulatory agencies.

1.8 ENVIRONMENTAL COORDINATION, PERMITS, NOTICES, REVIEWS AND/OR APPROVALS

The Contractor shall be responsible for contacting the appropriate Federal, State, Regional, and local environmental agencies to identify all required environmental permits (construction and operating), notices, reviews, and approvals required for the project. Once the requirements are identified, the Contractor shall be responsible for coordinating the requirements with the Contracting Officer in regard to implementation for a Federal Facility project. The Contractor shall ensure that all coordination, permits, notices, reviews and/or approvals are completed and submitted with each applicable phase of the design. Prior to construction starting for any phase, the Contractor shall assure that all permits and/or approvals are received and copies are submitted to the Contracting Officer. The Contractor shall be responsible for any contract delays resulting from failure to obtain environmental permits, notices, reviews and/or approvals when required.

1.8.1 Applications, Supporting Documents, and Fees

The Contractor shall obtain and complete all environmental permit applications and notices including any documents required for a modification for an existing permit. The Contractor is responsible for preparing all supporting documents, including but not limited to engineering reports, emission surveys, diagrams, pollutant load calculations, etc. If, in lieu of permits, the governing agency requires review and approval of the design, the Contractor shall submit and obtain approval of the design and associated documents. The Contractor shall be responsible for all fees associated with the permits, applications, reviews, approvals, and notices.

1.8.2 Permits, Notices, Reviews, and/or Approvals

The following is a listing of permits, notices, reviews, and/or approvals which **may be** required for this project. This listing and requirements are not to be considered all-inclusive by the Contractor, but is provided as information that may be used in successfully accomplishing the environmental compliances.

- a. In the State of Nebraska, **EPA** has authority for the National Pollutant Discharge Elimination System (NPDES) program. Construction activities which result in disturbance of 1 acre of land or more, coverage under the EPA Storm Water General Permit For Construction Activities (Permit No.) is required. The Contractor shall be responsible for editing and applying Specification Section 01562 (Nebraska) NPDES PERMIT REQUIREMENTS FOR STORM WATER DISCHARGES FROM CONSTRUCTION SITES.
- b. The County of Saunders requires a permit for Flood Plain Development. It is undecided at this time who shall be responsible for applying for this permit. The completed Flood

Plain Development Permit Application, a set of plans, copies of both the Section 404 permit and State of Nebraska 401 permit, shall be forward to George Borrison (Telephone Number 402-443-8123) for approval. This permit and the required documents need to be to the County at least 2 1/2 weeks prior to the first Monday of the month. The County Review Board meets on the first Monday of the month at 7:30 P.M. and a representative needs to be present. The permit must also be approved by the County Board of Supervisors the following Tuesday at 9:30 A.M. and a representative needs to be present. The entire process can take up to 30 days for this approval. The contractor is responsible for the fees associated with the permit. The Office Saunders County Planning and Zoning Application for a floodplain permit is attached.

1.9 ENVIRONMENTAL PROTECTION PLAN

Prior to commencing construction activities or delivery of materials to the site, the Contractor shall submit an Environmental Protection Plan for review and approval by the Contracting Officer. The purpose of the Environmental Protection Plan is to present a comprehensive overview of known or potential environmental issues which the Contractor must address during construction. Issues of concern shall be defined within the Environmental Protection Plan as outlined in this section. The Contractor shall address each topic at a level of detail commensurate with the environmental issue and required construction task(s). Topics or issues which are not identified in this section, but which the Contractor considers necessary, shall be identified and discussed after those items formally identified in this section. Prior to submittal of the Environmental Protection Plan, the Contractor shall meet with the Contracting Officer for the purpose of discussing the implementation of the initial Environmental Protection Plan; possible subsequent additions and revisions to the plan including any reporting requirements; and methods for administration of the Contractor's Environmental Plans. The Environmental Protection Plan shall be current and maintained on site by the Contractor.

1.9.1 Compliance

No requirement in this Section shall be construed as relieving the Contractor of any applicable Federal, State, and local environmental protection laws and regulations. During Construction, the Contractor shall be responsible for identifying, implementing, and submitting for approval any additional requirements to be included in the Environmental Protection Plan.

1.9.2 Contents

The environmental protection plan shall include, but shall not be limited to, the following:

- a. Name(s) of person(s) within the Contractor's organization who is(are) responsible for ensuring adherence to the Environmental Protection Plan.

- b. Name(s) and qualifications of person(s) responsible for manifesting hazardous waste to be removed from the site, if applicable.
- c. Name(s) and qualifications of person(s) responsible for training the Contractor's environmental protection personnel.
- d. Description of the Contractor's environmental protection personnel training program.
- e. An erosion and sediment control plan which identifies the type and location of the erosion and sediment controls to be provided. The plan shall include monitoring and reporting requirements to assure that the control measures are in compliance with the erosion and sediment control plan, Federal, State, and local laws and regulations. A Storm Water Pollution Prevention Plan (SWPPP) may be substituted for this plan.
- f. Drawings showing locations of proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials including methods to control runoff and to contain materials on the site.
- g. Traffic control plans including measures to reduce erosion of temporary roadbeds by construction traffic, especially during wet weather. Plan shall include measures to minimize the amount of mud transported onto paved public roads by vehicles or runoff.
- h. Work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. Plan should include measures for marking the limits of use areas including methods for protection of features to be preserved within authorized work areas.
- i. Drawing showing the location of borrow areas.
- j. The Spill Control plan shall include the procedures, instructions, and reports to be used in the event of an unforeseen spill of a substance regulated by 40 CFR 68, 40 CFR 302, 40 CFR 355, and/or regulated under State or Local laws and regulations. The Spill Control Plan supplements the requirements of EM 385-1-1 . This plan shall include as a minimum:
 - 1. The name of the individual who will report any spills or hazardous substance releases and who will follow up with complete documentation. This individual shall immediately notify the Contracting Officer and the local Fire Department in addition to the legally required Federal, State, and local reporting channels (including the National Response Center 1-800-424-8802) if a reportable quantity is released to the environment. The plan shall contain a list of the required reporting channels and telephone numbers.
 - 2. The name and qualifications of the individual who will be responsible for implementing and supervising the containment and

cleanup.

3. Training requirements for Contractor's personnel and methods of accomplishing the training.

4. A list of materials and equipment to be immediately available at the job site, tailored to cleanup work of the potential hazard(s) identified.

5. The 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.

6. The methods and procedures to be used for expeditious contaminant cleanup.

k. A non-hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including clearing debris. The plan shall include schedules for disposal. The Contractor shall identify any subcontractors responsible for the transportation and disposal of solid waste. Licenses or permits shall be submitted for solid waste disposal sites that are not a commercial operating facility. Evidence of the disposal facility's acceptance of the solid waste shall be attached to this plan during the construction.

l. A recycling and solid waste minimization plan with a list of measures to reduce consumption of energy and natural resources. The plan shall detail the Contractor's actions to comply with and to participate in Federal, State, Regional, and local government sponsored recycling programs to reduce the volume of solid waste at the source.

m. An air pollution control plan detailing provisions to assure that dust, debris, materials, trash, etc., do not become air borne and travel off the project site.

n. A contaminant prevention plan that: identifies potentially hazardous substances to be used on the job site; identifies the intended actions to prevent introduction of such materials into the air, water, or ground; and details provisions for compliance with Federal, State, and local laws and regulations for storage and handling of these materials. In accordance with EM 385-1-1, a copy of the Material Safety Data Sheets (MSDS) and the maximum quantity of each hazardous material to be on site at any given time shall be included in the contaminant prevention plan. As new hazardous materials are brought on site or removed from the site, the plan shall be updated.

o. A waste water management plan that identifies the methods and procedures for management and/or discharge of waste waters which are directly derived from construction activities, such as concrete curing water, clean-up water, dewatering of ground water, disinfection water, hydrostatic test water, and water used in flushing of lines. If a settling/retention pond is required, the plan shall include the design of the pond including drawings, removal plan, and testing requirements

for possible pollutants. If land application will be the method of disposal for the waste water, the plan shall include a sketch showing the location for land application along with a description of the pretreatment methods to be implemented. If surface discharge will be the method of disposal, a copy of the permit and associated documents shall be included as an attachment prior to discharging the waste water.

p. A historical, archaeological, cultural resources biological resources and wetlands plan that defines procedures for identifying and protecting historical, archaeological, cultural resources, biological resources and wetlands known to be on the project site: and/or identifies procedures to be followed if historical archaeological, cultural resources, biological resources and wetlands not previously known to be on site or in the area are discovered during construction. The plan shall include methods to assure the protection of known or discovered resources and shall identify lines of communication between Contractor personnel and the Contracting Officer.

q. A pesticide treatment plan shall be included and updated, as information becomes available. The plan shall include: sequence of treatment, dates, times, locations, pesticide trade name, EPA registration numbers, authorized uses, chemical composition, formulation, original and applied concentration, application rates of active ingredient (i.e. pounds of active ingredient applied), equipment used for application and calibration of equipment. The Contractor is responsible for Federal, State, Regional and Local pest management record keeping and reporting requirements as well as any additional specific requirements.

1.9.3 Appendix

Copies of all environmental permits, permit application packages, approvals to construct, notifications, certifications, reports, and termination documents shall be attached, as an appendix, to the Environmental Protection Plan.

1.10 PROTECTION FEATURES

This paragraph supplements the Contract Clause PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS. Prior to start of any on site construction activities, the Contractor and the Contracting Officer shall make a joint condition survey. Immediately following the survey, the Contractor shall prepare a brief report including a plan describing the features requiring protection under the provisions of the Contract Clauses, which are not specifically identified on the drawings as environmental features requiring protection along with the condition of trees, shrubs and grassed areas immediately adjacent to the site of work and adjacent to the Contractor's assigned storage area and access route(s), as applicable. This survey report shall be signed by both the Contractor and the Contracting Officer upon mutual agreement as to its accuracy and completeness. The Contractor shall protect those environmental features included in the survey report and any indicated on the drawings, regardless of interference which their preservation may cause

to the Contractor's work under the contract.

1.11 ENVIRONMENTAL ASSESSMENT OF CONTRACT DEVIATIONS

Any deviations, requested by the Contractor, from the drawings, plans and specifications which may have an environmental impact will be subject to approval by the Contracting Officer and may require an extended review, processing, and approval time. The Contracting Officer reserves the right to disapprove alternate methods, even if they are more cost effective, if the Contracting Officer determines that the proposed alternate method will have an adverse environmental impact.

1.12 NOTIFICATION

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with Federal, State or local environmental laws or regulations, permits, and other elements of the Contractor's Environmental Protection plan. The Contractor shall, after receipt of such notice, inform the Contracting Officer of the proposed corrective action and take such action when approved by the Contracting Officer. The Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions shall be granted or equitable adjustments allowed to the Contractor for any such suspensions. This is in addition to any other actions the Contracting Officer may take under the contract, or in accordance with the Federal Acquisition Regulation or Federal Law.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 ENVIRONMENTAL PERMITS AND COMMITMENTS

This paragraph supplements the Contractor's responsibility under the contract clause "PERMITS AND RESPONSIBILITIES" to the extent that the Government has obtained the following attached permit/certifications:

- a. Department of the Army Section 404 Authorization/Permit
- b. State of Nebraska Section 401 Water Quality Certification

The terms and conditions of the above permits and certifications have been incorporated into the design documents. If during construction, a modification to the design of the permitted/approved system is required, the Contractor shall be responsible for submitting the modified documents to the Contracting Officer for submittal to the governing agency. The Contractor shall not implement the modification until approval has been received from the Contracting Officer. The Contractor shall be responsible for all other environmental permits and/or approvals required by Federal, State, and local laws and regulations. See Section 01562 (NEBRASKA) NPDES PERMIT REQUIREMENTS FOR STORM WATER DISCHARGES FROM CONSTRUCTION SITES.

3.2 LAND RESOURCES

The Contractor shall confine all activities to areas defined by the

drawings and specifications. Prior to the beginning of any construction, the Contractor shall identify any land resources to be preserved within the work area. Except in areas indicated on the drawings or specified to be cleared, the Contractor shall not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and land forms without approval. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized. The Contractor shall provide effective protection for land and vegetation resources at all times as defined in the following subparagraphs. Stone, soil, or other materials displaced into uncleared areas shall be removed by the Contractor.

3.2.1 Work Area Limits

Prior to commencing construction activities, the Contractor shall mark the areas that need not be disturbed under this contract. Isolated areas within the general work area which are not to be disturbed shall be marked or fenced. Monuments and markers shall be protected before construction operations commence. The Contractor's personnel shall be knowledgeable of the purpose for marking and/or protecting particular objects.

3.2.2 Landscape

Trees, shrubs, vines, grasses, land forms and other landscape features not indicated and defined to be removed on the drawings shall be preserved by clearly identifying, marking, fencing, or wrapping with boards, or any other approved techniques. The Contractor shall restore landscape features damaged or destroyed during construction operations outside the limits of the approved work area.

3.2.3 Erosion and Sediment Controls

The Contractor shall be responsible for providing erosion and sediment control measures in accordance with Federal, State, and local laws and regulations. The erosion and sediment controls selected and maintained by the Contractor shall be such that water quality standards are not violated as a result of the Contractor's construction activities. The area of bare soil exposed at any one time by construction operations should be kept to a minimum. The Contractor shall construct or install temporary and permanent erosion and sediment control best management practices (BMPs). BMPs may include, but not be limited to, vegetation cover, stream bank stabilization, slope stabilization, silt fences, construction of terraces, interceptor channels, sediment traps, inlet and outfall protection, diversion channels, and sedimentation basins. Any temporary measures shall be removed after the area has been stabilized.

3.2.4 Contractor Facilities and Work Areas

The Contractor's field offices, staging areas, stockpile storage, and temporary buildings shall be placed in areas designated on the drawings or as directed by the Contracting Officer. Temporary movement or relocation of Contractor facilities shall be made only when approved. Erosion and sediment controls shall be provided for on-site borrow and spoil areas. Temporary excavation and embankments for plant and/or work areas shall be

controlled to protect adjacent areas.

3.3 WATER RESOURCES

The Contractor shall monitor construction activities to prevent pollution of surface and ground waters. Toxic or hazardous chemicals shall not be applied to soil or vegetation unless otherwise indicated. All water areas affected by construction activities shall be monitored by the Contractor. For construction activities immediately adjacent to impaired surface waters, the Contractor shall be capable of quantifying sediment or pollutant loading to that surface water when required by State or Federally issued Clean Water Act permits. Additional sampling may be required at the discretion and direction of the Contracting Officer at any time that excess loading is suspected.

3.3.1 Cofferdams, Diversions, and Dewatering Operations

Construction operations for dewatering, removal of cofferdams, tailrace excavation, and tunnel closure shall be controlled at all times to maintain compliance with existing State water quality standards and designated uses of the surface water body. The Contractor shall comply with the State of Nebraska water quality standards and anti-degradation provisions and the Clean Water Act Section 404.

3.3.2 Stream Crossings and Stream Crossing Structures

Stream crossings and stream crossing structures shall allow movement of materials or equipment without violating water pollution control standards of the Federal, State, and local governments. Construction of stream crossing structures shall be in compliance with Federal, State, Regional, and local laws and regulations including but not limited to permits and authorizations.

3.3.3 Wetlands

The Contractor shall not enter, disturb, destroy, or allow discharge of contaminants into any wetlands except as authorized herein. The Contractor shall be responsible for the protection of wetlands in accordance with paragraph ENVIRONMENTAL PERMITS, REVIEWS, AND APPROVALS. Authorization to enter specific wetlands identified shall not relieve the Contractor from any obligation to protect other wetlands within, adjacent to, or in the vicinity of the construction site and associated boundaries.

3.4 AIR RESOURCES

Equipment operation, activities, or processes performed by the Contractor shall be in accordance with all Federal and State air emission and performance laws and standards.

3.4.1 Particulates

Dust particles; aerosols and gaseous by-products from construction activities; and processing and preparation of materials, such as from asphaltic batch plants; shall be controlled at all times, including

weekends, holidays and hours when work is not in progress. The Contractor shall 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 which would cause the Federal, State, and local air pollution standards to be exceeded or which would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, baghouse, scrubbers, electrostatic precipitators or other methods will be permitted to control particulates in the work area. Sprinkling, to be efficient, must be repeated to keep the disturbed area damp at all times. The Contractor must have sufficient, competent equipment available to accomplish these tasks. Particulate control shall be performed as the work proceeds and whenever a particulate nuisance or hazard occurs. The Contractor shall comply with all State and local visibility regulations.

3.4.2 Odors

Odors from construction activities shall be controlled at all times. The odors shall not cause a health hazard and shall be in compliance with State regulations and/or local ordinances.

3.4.3 Sound Intrusions

The Contractor shall keep construction activities under surveillance and control to minimize environment damage by noise. The Contractor shall comply with the provisions of the State of Nebraska rules.

3.4.4 Burning

Burning shall be permitted in the designated borrow area with the appropriate permits. A burning permit can be obtained from the Ashland City Hall, 2304 Silver Street from 8:00 A.M. to 4:30 P.M. There is no charge for the burning permit and it can be applied for and awarded at the same time. Per the burning the permit the Contractor will notify the appropriate people that burning it taking place. At no time will burning be allowed on the Camp Ashland property.

3.5 CHEMICAL MATERIALS MANAGEMENT AND WASTE DISPOSAL

Disposal of wastes shall be as directed below, unless otherwise specified in other sections and/or shown on the drawings.

3.5.1 Solid Wastes

Solid wastes (excluding clearing debris) shall be placed in containers which are emptied on a regular schedule. Handling, storage, and disposal shall be conducted to prevent contamination. Segregation measures shall be employed so that no special, hazardous or toxic waste will become co-mingled with solid waste. The Contractor shall transport solid waste off Government property and dispose of it in compliance with Federal, State, and local requirements for solid waste disposal. A Subtitle D RCRA permitted landfill shall be the minimum acceptable off-site solid waste disposal option. The Contractor shall verify that the selected transporters and disposal facilities have the necessary permits and

licenses to operate.

3.5.2 Chemicals and Chemical Wastes

Chemicals shall be dispensed ensuring no spillage to the ground or water. Periodic inspections of dispensing areas to identify leakage and initiate corrective action shall be performed and documented. This documentation will be periodically reviewed by the Government. Chemical waste shall be collected in corrosion resistant, compatible containers. Collection drums shall be monitored and removed to a staging or storage area when contents are within 6 inches of the top. Wastes shall be classified, managed, stored, and disposed of in accordance with Federal, State, and local laws and regulations.

3.5.3 Contractor Generated Hazardous Wastes/Excess Hazardous Materials

Hazardous wastes are defined in 40 CFR 261, or are as defined by applicable State and local regulations. Hazardous materials are defined in 49 CFR 171 - 178. The Contractor shall, at a minimum, manage and store hazardous waste in compliance with 40 CFR 262. The Contractor shall take sufficient measures to prevent spillage of hazardous and toxic materials during dispensing. The Contractor shall segregate hazardous waste from other materials and wastes, shall protect it from the weather by placing it in a safe covered location, and shall take precautionary measures such as berming or other appropriate measures against accidental spillage. The Contractor shall be responsible for storage, describing, packaging, labeling, marking, and placarding of hazardous waste and hazardous material in accordance with 49 CFR 171 - 178, State, and local laws and regulations.

The Contractor shall transport Contractor generated hazardous waste off Government property within 60 days in accordance with the Environmental Protection Agency and the Department of Transportation laws and regulations. The Contractor shall dispose of hazardous waste in compliance with Federal, State and local laws and regulations. Spills of hazardous or toxic materials shall be immediately reported to the Contracting Officer. Cleanup and cleanup costs due to spills shall be the Contractor's responsibility. The disposition of Contractor generated hazardous waste and excess hazardous materials are the Contractor's responsibility.

3.5.4 Fuel and Lubricants

Storage, fueling and lubrication of equipment and motor vehicles shall be conducted in a manner that affords the maximum protection against spill and evaporation. Fuel, lubricants and oil shall be managed and stored in accordance with all Federal, State, Regional, and local laws and regulations. Used lubricants and used oil to be discarded shall be stored in marked corrosion-resistant containers and recycled or disposed in accordance with 40 CFR 279, State, and local laws and regulations. Storage of fuel on the project site shall be accordance with all Federal, State, and local laws and regulations.

3.5.5 Waste Water

Disposal of waste water shall be as specified below.

- a. Waste water from construction activities, such as on site material processing, foundation and concrete clean-up, water used in concrete trucks, forms, etc. shall not be allowed to enter water ways or to be discharged prior to being treated to remove pollutants. The Contractor shall dispose of the construction related waste water off-Government property in accordance with all Federal, State, Regional and Local laws and regulations or by collecting and placing it in a retention pond where suspended material can be settled out and/or the water can evaporate to separate pollutants from the water. The site for the retention pond shall be coordinated and approved with the Contracting Officer. The residue left in the pond prior to completion of the project shall be removed, tested, and disposed off-Government property in accordance with Federal, State, and local laws and regulations. The area shall be backfilled to the original grade, top-soiled and seeded/sodded.
- b. For discharge of ground water, the Contractor shall discharge in accordance with all Federal, State, Regional, and/or Local laws and regulations.
- c. Water generated from the flushing of lines after disinfection or disinfection in conjunction with hydrostatic testing shall be land applied in accordance with all Federal, State, and local laws and regulations for land application or discharged into the sanitary sewer with prior approval and/or notification to the Waste Water Treatment Plant's Operator.

3.6 RECYCLING AND WASTE MINIMIZATION

The Contractor shall participate in State and local government sponsored recycling programs. The Contractor is further encouraged to minimize solid waste generation throughout the duration of the project.

3.7 HISTORICAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

If during excavation or other construction activities any previously unidentified or unanticipated historical, archaeological, and cultural resources are discovered or found, all activities that may damage or alter such resources shall be temporarily 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 unrecorded/unanticipated historical human activity. Upon such discovery or find, the Contractor shall immediately notify the Contracting Officer 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. The Contractor shall cease all activities that may result in impact to or the destruction of these resources. The Contractor shall secure the area and prevent employees or other persons from trespassing on, removing, or otherwise disturbing such resources.

3.8 BIOLOGICAL RESOURCES

The Contractor shall minimize interference with, disturbance to, and damage to fish, wildlife, and plants including their habitat. The Contractor shall be responsible for the protection of threatened and endangered animal and plant species including their habitat in accordance with Federal, State, Regional, and local laws and regulations.

3.8.1 Bald Eagles

The Contractor shall be responsible for identifying and avoiding disturbing bald eagles which are nesting in the project area. Nesting Bald Eagles shall not be disturbed. The Government requires avoiding nesting bald eagles by eliminating activity within .25 mile of the nesting bald eagle. The Contractor shall ensure that his employees are able to identify bald eagles and shall avoid disturbing bald eagles.

There is a known bald eagle nest located on the project site. It is located within a .25 mile of the upper end of the levee segment to be constructed. The known eagle nest is marked on plan B103. The US Fish and Wildlife Service requirements are that the nesting location not be disturbed between 1 February through 1 August of any year. (See attached US Fish and Wildlife Service letter dated July 14, 2004.) Construction or use of the haul road within .25 miles of the inhabited nest, will not be allowed during eagle nesting period.

3.8.2 Interior Least Terns and/or Piping Plovers

No Construction shall occur in the area identified as the borrow area if nesting of the Interior Least Terns and/or Piping Plovers is occurring between the dates of April 15 and August 15 of any year. The Corps of Engineers, Omaha District will monitor for terns and plovers in the borrow area. It is the plan to mylar flag the borrow area in March and April, 2005 that will be or have been previously cleared and grubbed in order to deter nesting of terns and plovers.

3.8.3 Migratory Bird Treaty Act

Due to nesting migratory birds, clearing and grubbing for the project will only be allowed from 01 September 2004 to 31 January 2005, and/or 01 September 2005 to 31 January 2006. Clearing and grubbing will not be allowed anywhere on the site outside of these dates, due to nesting of migratory birds. Adherence to these guidelines will help avoid the unnecessary take of migratory birds and the possible need for law enforcement action.

3.9 MILITARY MUNITIONS

In the event the Contractor discovers or uncovers military munitions as defined in 40 CFR 260, the Contractor shall immediately stop work in that area and immediately inform the Contracting Officer.

3.10 PREVIOUSLY USED EQUIPMENT

The Contractor shall clean all previously used construction equipment prior

to bringing it onto the project site. The Contractor shall ensure that the equipment is free from soil residuals, egg deposits from plant pests, noxious weeds, and plant seeds. The Contractor shall consult with the USDA jurisdictional office for additional cleaning requirements.

3.11 MAINTENANCE OF POLLUTION FACILITIES

The Contractor shall maintain permanent and temporary pollution control facilities and devices for the duration of the contract or for that length of time construction activities create the particular pollutant.

3.12 TRAINING OF CONTRACTOR PERSONNEL

The Contractor's personnel shall be trained in all phases of environmental protection and pollution control. Documentation of training shall include, time, date, topics covered, trainer, and persons in attendance and shall be maintained by the Contractor. The Contractor shall conduct environmental protection/pollution control meetings for all Contractor personnel prior to commencing construction activities. Additional meetings shall be conducted for new personnel and when site conditions change. The training and meeting agenda shall include: methods of detecting and avoiding pollution; familiarization with statutory and contractual pollution standards; installation and care of devices, vegetative covers, and instruments required for monitoring purposes to ensure adequate and continuous environmental protection/pollution control; anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants; recognition and protection of archaeological sites, artifacts, wetlands, and endangered species and their habitat that are known to be in the area. See the above BIOLOGICAL RESOURCES paragraph.

3.13 POST CONSTRUCTION CLEANUP

The Contractor shall clean up all areas used for construction in accordance with Contract Clause: "Cleaning Up". The Contractor shall, unless otherwise instructed in writing by the Contracting Officer, obliterate all signs 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. The disturbed area shall be graded, filled and the entire area seeded unless otherwise indicated.

-- End of Section --

OFFICE OF THE SAUNDERS COUNTY PLANNING AND ZONING
Application for a **CONDITIONAL PERMIT**. Number _____

Pursuant to Section VIII of the Saunders County Zoning Regulations, application is hereby made for the following proposed use: _____

Section _____ Township _____ Range _____ Lot _____
Lot Size _____ Zoning District _____
Estimated Cost of Construction _____

There is hereby deposited with the office of the Planning and Zoning Administrator the sum of \$200.00 (make check payable to Saunders County Planning & Zoning), which I understand is a non-refundable fee. I respectfully request the Saunders County Planning Commission and the Saunders County Board of Supervisors to hold a hearing on this matter after giving proper notice of time, place and purpose of said hearing as provided by law.

Permits when issued are **Non-Transferable**.

Date of Application _____

(Applicant Printed Name)

Daytime Phone _____

Applicant Address _____

Signature of Applicant

Signature of Property Owner

Reviewed by: _____
Planning & Zoning Office

To: Saunders County Board of Supervisors

We, the Saunders County Planning Commission recommend the foregoing application be () Approved () Disapproved (show reason on back)

Dated this _____ day _____, 20_____

Chairman Saunders County
Planning Commission

Be it resolved by the Saunders County Board of Supervisors that the foregoing application be () Approved () Disapproved (show reason on back)

Dated this _____ day _____, 20_____

Chairman Saunders County
Board of Supervisors

ATTEST: _____
Saunders County Clerk

Dated this _____ day _____, 20_____

SAUNDERS COUNTY FLOODPLAIN DEVELOPMENT PERMIT/APPLICATION

Permit/Application # _____ Date _____

1. Name of Applicant _____

2. Address of Development Site _____

3. Type of Development

Filling _____ Grading _____ Excavation _____ Routine Maintenance _____

Minor Improvement _____ Substantial Improvement _____
(If Applicable)

Pre-improvement Value of Structure _____ Cost of Improvement _____

4. Description of Development _____

5. Property located in a designated Floodway? Yes _____ No _____

IF ANSWERED YES, CERTIFICATION MUST BE PROVIDED PRIOR TO THE ISSUANCE OF A PERMIT TO DEVELOP, THAT THE PROPOSED DEVELOPMENT WILL RESULT IN NO INCREASE IN THE BASE FLOOD (100-year) ELEVATION.

6. Property located in a designated Floodway Fringe? Yes _____ No _____

a) Elevation of the Base (100-year) Flood _____ MSL/NGVD

b) Elevation/floodproofing requirement _____ MSL/NGVD

c) Elevation of the proposed development site (if known) _____ MSL/NGVD

THIS PERMIT IS ISSUED WITH THE CONDITION THAT THE LOWEST FLOOR (INCLUDING BASEMENT FLOOR) OF ANY NEW OR SUBSTANTIALLY IMPROVED RESIDENTIAL BUILDING WILL BE ELEVATED ABOVE THE BASE FLOOD ELEVATION. IF THE PROPOSED DEVELOPMENT IS A NONRESIDENTIAL BUILDING, THIS PERMIT IS ISSUED WITH THE CONDITION THAT THE LOWEST FLOOR (INCLUDING BASEMENT) OF A NEW OR SUBSTANTIALLY IMPROVED NONRESIDENTIAL BUILDING WILL BE ELEVATED OR FLOODPROOFED ABOVE THE BASE FLOOD ELEVATION.

7. Source of Base Flood Elevation Data if not available on FIRM. _____

Panel number of FIRM _____

8. Other permits required?

Corps of Engineers 404 Permit: Yes _____ No _____

State Permit: Yes _____ No _____

Local Levee District: Yes _____ No _____

Local Drainage District: Yes _____ No _____

Other: _____

All provisions of Saunders County, Flood Plain District Resolution Number 13-1990 shall be complied with.

THIS PERMIT IS ISSUED WITH THE CONDITION THAT THE DEVELOPER/OWNER WILL PROVIDE CERTIFICATION BY A REGISTERED ENGINEER, ARCHITECT, OR LAND SURVEYOR OF THE "AS-BUILT" LOWEST FLOOR (INCLUDING BASEMENT) ELEVATION OF ANY NEW OR SUBSTANTIALLY IMPROVED BUILDING COVERED BY THIS PERMIT.

Plans and Specifications submitted this _____ Day of _____, 20_____.

Signature of Developer Owner _____

Authorizing Official
(Name and Title)

hp LaserJet 3015

HP LASERJET FAX

Jul-6-2004 16:05



Fax Call Report

Job	Date	Time	Type	Identification	Duration	Pages	Result
300	7/ 6/2004	16:03:56	Receive	402 443 8149	1:04	3	OK

07/06/2004 16:04 402-443-8149 SA CO ZONING PAGE 01

SAUNDERS COUNTY PLANNING & ZONING OFFICE

[402]443-8123 PHONE [402]443-5010 FAX

FACSIMILE TRANSMITTAL SHEET

TO: Vicki Dennis FROM: GEORGE BORRESON

COMPANY: CORP OF ENG DATE: 7-6-2004

FAX NUMBER: 402-221-3842 TOTAL NO. OF PAGES INCLUDING COVER: 3

PHONE NUMBER: 402-221-3791 SENDER'S REFERENCE NUMBER:

RE: application for cond permit YOUR REFERENCE NUMBER:

URGENT FOR REVIEW PLEASE COMMENT PLEASE REPLY PLEASE RECYCLE

NOTES/COMMENTS

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STATE OF NEBRASKA

cmj 8/15/03
bl



Mike Johanns
Governor

DEPARTMENT OF ENVIRONMENTAL QUALITY

Michael J. Linder

Director

Suite 400, The Atrium

1200 'N' Street

P.O. Box 98922

Lincoln, Nebraska 68509-8922

Phone (402) 471-2186

FAX (402) 471-2909

AUG 15 2003

Candace M. Gorton, Chief
Environmental, Economics and
Cultural Resources Section
Corps of Engineers, Omaha District
106 South 15th Street
Omaha, NE 68102-1618

RE: State Water Quality Certification for Section 404 R Action
in the matter of the Western Sarpy County/Clear Creek Levee
Improvement Project.

Dear Ms. Gorton:

We have reviewed the information received regarding the
above-referenced application and feel the activity will comply
with Section 401 of the Clean Water Act of 1977, as amended by
the Water Quality Act of 1987, subject to meeting the following
conditions:

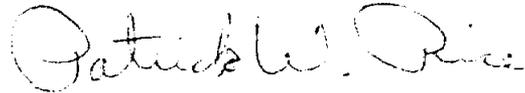
Construction activities should employ controls to reduce
the sediment concentration of any water returning to the
stream or river. This includes revegetating the banks and
maintaining this condition.

Wetland habitat lost due to the placement of fill shall be
mitigated by restoring or creating equivalent in-kind
wetland habitat at a minimum ratio of 1.5 restored or
created acres for every 1.0 acre of affected area.

We therefore, by this letter, provide Section 401 Water
Quality Certification. This certification does not constitute
authorization to conduct your project. It is a statement of
compliance with Surface Water Quality Standards only, which is
one requirement to gain authorization from the U.S. Army Corps

of Engineers in the form of a Section 404 permit. If you have any questions, please feel free to call Terry Hickman on my staff, at (402) 471-2875.

Sincerely,

A handwritten signature in cursive script that reads "Patrick W. Rice". The signature is written in dark ink and is positioned above the typed name.

Patrick W. Rice
Assistant Director

TH

cmg 11/9/04

Bob

FOR
VICKIE
DENNIS
x3791

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
Nebraska Field Office
203 West Second Street
Grand Island, Nebraska 68801

July 14, 2004

Mr. Bob Nebel
Planning Division
U.S. Army Corps of Engineers
Omaha District
106 S. 15th Street
Omaha, NE 68102

Dear Mr. Nebel:

This responds to your July 12, 2004, request for comments from the U.S. Fish and Wildlife Service regarding the Camp Ashland Levee Construction proposal and the need to protect an active bald eagle nest located on Camp Ashland from disturbance. The bald eagle nest is located within 0.25-mile of the borrow site haul road and the upper end of the levee segment to be constructed. We concur with your proposal to maintain a 0.25-mile buffer zone around the bald eagle nest during the period February 1 - August 1, 2005 and 2006. In addition, if least terns and/or piping plovers are found to be nesting at the borrow site in 2006, the initiation of construction activities should be delayed until August 15, 2006.

If you have further questions, please contact Mr. Wally Jobman within our office at (308)382-6468, extension 16.

Sincerely,



Steve Anschutz
Nebraska Field Supervisor

cc: FWS, Special Agent, Lincoln, NE (Attn: Mark Webb)
NGPC; Lincoln, NE (Attn: Julie Godbersen)
NGPC; Lincoln, NE (Attn: John Dinan)

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01400

SPECIAL SAFETY REQUIREMENTS

05/00 Rev 04/04

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SECTION 01400

SPECIAL SAFETY REQUIREMENTS
05/00 Rev 04/04

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.

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR 1926 Safety and Health Regulations for
Construction

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2003) Safety and Health Requirements
Manual

1.2 SUMMARY

1.2.1 General

This section provides guidelines for preparation of accident prevention plans, and to implement the accident prevention clause (this specification) and EM 385-1-1, Safety and Health Requirements Manual. The U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1 is available from U.S. Government bookstores operated by the Government Printing Office [and a copy is included on the CD-ROM issued with this solicitation.] Changes to EM 385-1-1 applicable to this contract include only those revisions posted at the following website (all revisions up to the time this solicitation is issued): http://www.hq.usace.army.mil/soh/hqusace_soh.htm ("Changes to EM"). U.S. Government bookstores are located in most major cities including Milwaukee, Chicago, Kansas City, Denver, and Pueblo, Colorado. While on Western Sand and Gravel Company (WSGC) property, the Contractor shall adhere to all WSGC safety requirements.

1.3 PRECONSTRUCTION CONFERENCE

See Contract Clause "PRECONSTRUCTION CONFERENCE". A preconstruction conference will be scheduled prior to beginning of site work. Requirements relative to planning and administration of the overall safety program will be discussed.

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. The following shall be submitted in accordance with Section 01330SUBMITTAL PROCEDURES:

Administrative Submittals

Accident Prevention Plan;

The written site-specific Accident Prevention Plan.

1.5 ACCIDENT PREVENTION PLAN

The Contractor shall submit, prior to the start of on site construction activity, a proposed accident prevention plan which shall be the accident prevention policy to be followed by all of the Contractor's and subcontractor's personnel and supervisory staff during performance of the work.

1.5.1 Requirements

The proposed plan shall be developed after a careful analysis of the work involved and shall be tailored specifically to the conditions of this project. The Contractor's accident prevention plan shall contain, as a minimum, the following general information or procedures for the activity indicated. The Contractor shall submit his plan for review and acceptance prior to commencing work.

1.5.1.1 Responsible Individual(s)

The Contractor shall designate an onsite employee as the individual responsible for insuring the accident prevention plan is implemented and enforced.

1.5.1.2 Subcontractor Supervision

Explain procedures to assure that subcontractor(s) fully comply with the accident prevention plan.

1.5.1.3 Indoctrination of New Employees

The plan shall include provisions for advising workers of the purpose of the accident prevention plan, specific hazards on the job and precautions to be taken, emergency procedures, information concerning tool box safety meetings, required protective equipment, cleanup rules and location of company safety rules (posting or handout).

1.5.1.4 Tool Box Safety Meetings

Hold weekly "Tool Box" safety meetings. Timely safety subjects shall be determined by a responsible individual. Employees will be informed of

time, location, who will conduct, and subject. Identify procedures for including subcontractors. The Contractor shall provide a copy of the Weekly Tool Box Meeting and Monthly Supervisor's Safety Meeting to the Contracting Officer.

1.5.1.5 Fire Prevention and Protection

Identify source of fire protection. Insure adequate fire extinguishers, water barrels, or other fire-fighting equipment is located on site. Explain prevention activities to include storage areas and special hazards such as welding and use of flammable liquids, and other special hazards.

1.5.1.6 Housekeeping

Daily cleanup of all debris and waste materials is required. Adequate disposal containers should be placed strategically around the site. Debris shall be removed on a regular basis. Explain procedures that include use of barrels, dumpsters, trash chutes, etc.

1.5.1.7 Mechanical Equipment Inspection

All mechanical equipment (trucks, cranes, forklifts, backhoes, graders, etc.) shall be inspected prior to use and at fixed intervals throughout the life of the contract. Explain how inspections will be accomplished (frequency, by whom, and records to be kept).

1.5.1.8 First Aid and Medical Facilities

First aid facilities shall be made available on the job site. Arrangements for emergency medical attention shall be made prior to start of work. All emergency numbers (doctor, hospital, ambulance, fire department) shall be posted at the project superintendent's office.

1.5.1.9 Sanitation

Include provisions for toilet facilities, drinking water and washing facilities. A sufficient number of toilet facilities as specified in EM 385-1-1 shall be provided unless permission is granted to use existing facilities (portable chemical are authorized). Insure safe drinking water and individual cups are available. For the projects where corrosive or toxic materials are used, separate washing facilities are required.

1.5.1.10 Safety Promotions

The Contractor shall promote accident prevention. Identify method (posters, awards etc.).

1.5.1.11 Accident Reporting

All accidents (employee injuries, vehicle, building, or equipment damage etc.) regardless of their severity, shall be reported to the onsite government representative or to the area engineer, who in turn will advise the Contractor of forms to be submitted and timeframes.

1.5.1.12 Job Hazard Analysis

When job situations change and it is necessary to alter safety requirements, a Job Hazard Analysis will be accomplished, documented, and added as an addendum to the Accident Prevention Plan. Each Job Hazard Analysis shall include, but not be limited to, a description of the work, probable hazards related to that work and positive precautionary measures to be taken to reduce or eliminate each hazard. An example of changing situations may be new subcontractors performing work such as earth moving, trenching, concrete work, roofing, electrical, masonry etc. The onsite government representative will determine the format and amount of detail required of the written plan.

1.6 EXCAVATION AND TRENCHING

The standards for excavation and trenching are outlined in 29 CFR 1926, Subpart P. These standards shall be followed in addition to those outlined in EM 385-1-1.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

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SECTION 01451A

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1/03; Omaha Revision 1/04

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SECTION 01451A

CONTRACTOR QUALITY CONTROL
1/03; Omaha Revision 1/04

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.

ASTM INTERNATIONAL (ASTM)

ASTM D 3740 (2001) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction

ASTM E 329 (2002) Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

1.2 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control program, and all costs associated therewith shall be included in the applicable unit prices or lump-sum prices contained in the Bidding Schedule.

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 shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

Administrative Submittals

Contractor Quality Control Plan;

The written site-specific Contractor Quality Control Plan as specified herein.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the Contract Clause titled "Inspection of Construction." The quality control system shall consist of plans, procedures, and organization necessary to produce an end product which complies with the contract requirements. The system shall cover all design-construction and construction operations, both onsite and offsite, and shall be keyed to the proposed construction sequence.

The site project superintendent will be held responsible for the quality of work on the job. The site project superintendent is subject to removal by the Contracting Officer for non-compliance with either the established quality control system or quality requirements specified in this contract. The site project superintendent in this context shall be the highest-level manager responsible for the overall construction activities at the site, including quality and production. The site project superintendent shall maintain a physical presence at the site at all times, except as otherwise acceptable to the Contracting Officer.

3.2 QUALITY CONTROL PLAN

The Contractor shall furnish for review by the Government, not later than 10 days after receipt of notice to proceed, the Contractor Quality Control (CQC) Plan proposed to implement the requirements of the Contract Clause titled "Inspection of Construction." The plan shall identify personnel, procedures, control, instructions, tests, records, and forms to be used. The Government will consider an interim plan for the first 30 days of operation. Construction will be permitted to begin only after acceptance of the CQC Plan or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the 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 to be started.

3.2.1 Content of the CQC Plan

The CQC Plan shall include, as a minimum, the following to cover all construction operations, both onsite and offsite, including work by subcontractors, fabricators, suppliers, and purchasing agents:

- a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff shall implement the three phase control system for all aspects of the work specified. The staff shall include a CQC System Manager who shall report to the Project Manager or someone higher in the Contractor's organization. Project Manager in this context shall mean the individual with responsibility for the overall management of the project, including quality and production.

- b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.
- c. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work which is not in compliance with the contract. The CQC System Manager shall issue letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities. Copies of these letters shall also 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 shall be in accordance with Section 01330 SUBMITTAL PROCEDURES.
- e. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. (Laboratory facilities approved by the Contracting Officer shall be used.)
- f. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.
- g. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures shall establish verification 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 Plan

Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves the right to require the Contractor to make changes in his 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, the Contractor shall notify the Contracting Officer in writing of any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

3.3 COORDINATION MEETING

After the Preconstruction Conference, before start of construction, and prior to acceptance by the Government of the CQC Plan, the Contractor shall meet with the Contracting Officer or Authorized Representative and discuss the Contractor's quality control system. The CQC Plan shall be submitted for review a minimum of 10 calendar days prior to the Coordination Meeting.

During the meeting, a mutual understanding of the system details shall 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 shall be prepared by the Government and signed by both the Contractor and the Contracting Officer. The minutes shall 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 safety and contract compliance. Personnel identified in the technical provisions as requiring specialized skills to assure the required work is being performed properly will also be included as part of the CQC organization. The Contractor's CQC staff shall 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. The CQC staff shall be subject to acceptance by the Contracting Officer. The Contractor shall provide adequate office space, filing systems and other resources as necessary to maintain an effective and fully functional CQC organization. Complete records of all letters, material submittals, shop drawing submittals, schedules and all other project documentation shall be promptly furnished to the CQC organization by the Contractor. The CQC organization shall be responsible to maintain these documents and records at the site at all times, except as otherwise acceptable to the Contracting Officer.

3.4.2 CQC System Manager

The Contractor shall identify as CQC System Manager an individual within the onsite work organization who shall be responsible for overall management of CQC and have the authority to act in all CQC matters for the Contractor. The CQC System Manager shall be a construction person with a

minimum of 5 years in related work. This CQC System Manager shall be on the site at all times during construction and shall be employed by the prime Contractor. The CQC System Manager shall be assigned as System Manager but may have duties as project superintendent in addition to quality control. An alternate for the CQC System Manager shall be identified in the plan to serve in the event of the System Manager's absence. The requirements for the alternate shall be the same as for the designated CQC System Manager.

3.4.3 CQC Personnel

A staff shall be maintained under the direction of the CQC system manager to perform all QC activities. The staff must be of sufficient size to ensure adequate QC coverage of all work phases, work shifts, and work crews involved in the construction. These personnel may perform other duties, but must be fully qualified by experience and technical training to perform their assigned QC responsibilities and must be allowed sufficient time to carry out these responsibilities. The QC plan will clearly state the duties and responsibilities of each staff member. Other technical specifications may specify individuals for maintaining quality control for specific areas of work. These individuals shall be under the direction of the CQC System Manager.

3.4.4 Additional Requirement

In addition to the above experience and education requirements the CQC System Manager shall have completed the course entitled "Construction Quality Management For Contractors". This course is periodically offered at each of the four area offices in the Omaha District according to the following revolving training schedule:.

<u>Badger Area</u>	First Session	Between 15 & 25 April
	Second Session	Between 15 & 25 October
Point of Contact	Roy Brewer	(319) 753-1386
<u>Black Hills Area</u>	First Session	Between 1 & 10 March
	Second Session	Between 1 & 10 September
Point of Contact	Dwight Pochant	(605) 923-2983
<u>Fort Crook Area</u>	First Session	Between 15 & 25 January
	Second Session	Between 15 & 25 July
Point of Contact	Al Kreisler	(402) 293-2540
<u>Rocky Mountain</u>	First Session	Between 1 & 10 June
	Second Session	Between 1 & 10 December
Point of Contact	Paul Jendzejec	(719) 556-4184

The exact date and location for the sessions will be determined approximately 30 days in advance of the training. The cost of training is presently established at \$50 to be paid by each student in advance of the training. For information about a particular session, the best source is

the point of contact listed above.

3.4.5 Organizational Changes

The Contractor shall maintain the CQC staff at full strength at all times. When it is necessary to make changes to the CQC staff, the Contractor shall revise the CQC Plan to reflect the changes and submit the changes to the Contracting Officer for acceptance.

3.5 SUBMITTALS AND DELIVERABLES

Submittals, if needed, shall be made as specified in Section 01330 SUBMITTAL PROCEDURES. The CQC organization shall be responsible for certifying that all submittals and deliverables are in compliance with the contract requirements.

3.6 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 of control shall be conducted by the CQC System Manager for each definable feature of the construction work as follows:

3.6.1 Preparatory Phase

This phase shall 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 shall include:

- a. A review of each paragraph of applicable specifications, reference codes, and standards. Prior to the preparatory meeting for each definable feature of work, the Contractor shall provide all technical references (i.e. building codes, life safety codes, etc.) referenced in the project specifications for feature(s) of work being addressed at the preparatory meeting. These technical references shall be onsite and available for use by Contractor and Government personnel before the preparatory meeting is held and maintained until the feature(s) of work is/are accepted by the Government.
- b. A review of the contract drawings.
- c. A 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. A 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. A 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. A check to ensure that the portion of the plan for the work to be performed has been accepted by the Contracting Officer.
- j. Discussion of the initial control phase.
- k. The Government shall be notified at least 48 hours in advance of beginning the preparatory control phase. This phase shall 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 results of the preparatory phase actions shall be documented by separate minutes prepared by the CQC System Manager and attached to the daily CQC report. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.

3.6.2 Initial Phase

This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:

- a. A check of work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.
- b. Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing.
- c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with required sample panels as appropriate.
- d. Resolve all differences.
- e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
- f. The Government shall be notified at least 48 hours in advance of beginning the initial phase. Separate minutes of this phase shall be prepared by the CQC System Manager and attached to the daily CQC report. Exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.

- g. The initial phase should be repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

3.6.3 Follow-up Phase

Daily checks shall be performed to assure control activities, including control testing, are providing continued compliance with contract requirements, until completion of the particular feature of work. The checks shall be made a matter of record in the CQC documentation. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work. The Contractor shall not build upon nor conceal non-conforming work.

3.6.4 Additional Preparatory and Initial Phases

Additional preparatory and initial phases shall be conducted on the same definable features of work if: the quality of on-going work is unacceptable; if there are changes in the applicable CQC staff, onsite production supervision or work crew; if work on a definable feature is resumed after a substantial period of inactivity; or if other problems develop.

3.7 TESTS

3.7.1 Testing Procedure

The Contractor shall perform specified or required tests to verify that control measures are adequate to provide a product which conforms to contract requirements. Upon request, the Contractor shall furnish to the Government duplicate samples of test specimens for possible testing by the Government. Testing includes operation and/or acceptance tests when specified. The Contractor shall procure the services of a Corps of Engineers approved testing laboratory or establish an approved testing laboratory at the project site. The Contractor shall 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. Results of all tests taken, both passing and failing tests, shall be recorded on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test shall be given. If

approved by the Contracting Officer, actual test reports may be submitted later with a reference to the test number and date taken. An information copy of tests performed by an offsite or commercial test facility shall be provided directly to the Contracting Officer. 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.

3.7.2 Testing Laboratories

3.7.2.1 Capability Check

The Government reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the contract specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for testing soils, concrete, asphalt, and steel shall meet criteria detailed in ASTM D 3740 and ASTM E 329.

3.7.2.2 Capability Recheck

If the selected laboratory fails the capability check, the Contractor will be assessed the actual cost for the recheck to reimburse the Government for each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory. Such costs will be deducted from the contract amount due the Contractor.

3.7.3 Onsite Laboratory

The Government reserves the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests, and to check the Contractor's testing procedures, techniques, and test results at no additional cost to the Government.

3.7.4 Furnishing or Transportation of Samples for Testing

Costs incidental to the transportation of samples or materials shall be borne by the Contractor. Samples of materials for test verification and acceptance testing by the Government shall be delivered to the Resident or Area (as directed) Office.

Coordination for each specific test, exact delivery location, and dates will be made through the Resident or Area (as directed) Office.

3.8 COMPLETION INSPECTION

3.8.1 Punch-Out Inspection

Near the end of the work, or any increment of the work established by a time stated in the SPECIAL CONTRACT REQUIREMENTS Clause, "Commencement, Prosecution, and Completion of Work", or by the specifications, the CQC Manager shall conduct an inspection of the work. A punch list of items which do not conform to the approved drawings and specifications shall be

prepared and included in the CQC documentation, as required by paragraph DOCUMENTATION. The list of deficiencies shall include the estimated date by which the deficiencies will be corrected. The CQC System Manager or staff shall make a second inspection to ascertain that all deficiencies have been corrected. Once this is accomplished, the Contractor shall notify the Government that the facility is ready for the Government Pre-Final inspection.

3.8.2 Pre-Final Inspection

The Government will perform the pre-final inspection to verify that the facility is complete and ready to be occupied. A Government Pre-Final Punch List may be developed as a result of this inspection. The Contractor's CQC System Manager shall 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. Any items noted on the Pre-Final inspection shall be corrected in a timely manner. These inspections and any deficiency corrections required by this paragraph shall be accomplished within the time slated for completion of the entire work or any particular increment of the work if the project is divided into increments by separate completion dates.

3.8.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the Contracting Officer's Representative shall 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 Contracting Officer based upon results of the Pre-Final inspection. Notice shall be given to the Contracting Officer at least 14 days prior to the final acceptance inspection and shall include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining work performed under the contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance with the contract clause titled "Inspection of Construction".

3.9 DOCUMENTATION

The Contractor shall maintain current records providing factual evidence that required quality control activities and/or tests have been performed. These records shall include the work of subcontractors and suppliers and shall be on an acceptable form that includes, as a minimum, the following information:

- a. Contractor/subcontractor and their area of responsibility.
- b. Operating plant/equipment with hours worked, idle, or down for repair.

- c. Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of work performed each day by NAS activity number.
- d. Test and/or control activities performed with results and references to specifications/drawings requirements. The control phase shall be identified (Preparatory, Initial, Follow-up). List of deficiencies noted, along with corrective action.
- e. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.
- f. Submittals and deliverables reviewed, with contract reference, by whom, and action taken.
- g. Offsite surveillance activities, including actions taken.
- h. Job safety evaluations stating what was checked, results, and instructions or corrective actions. Include information identified by the "Responsible Individual(s)" for Safety as outlined in SECTION 01400, SPECIAL SAFETY REQUIREMENTS.
- i. Instructions given/received and conflicts in plans and/or specifications.
- j. Contractor's verification statement.

These records shall indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. The original and one copy of these records in report form shall be furnished to the Contracting Officer's Representative on the first day following the date(s) covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, one report shall be prepared and submitted for every 7 days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the CQC System Manager. The report from the CQC System Manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

3.10 SAMPLE FORMS

Sample forms enclosed at the end of this section.

3.11 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected

noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

3. Work Performed Today: (Indicate location and description of work performed by prime and/or subcontractors. When network analysis is used, identify work by NAS activity number).

4. Control Activities Performed:

Preparatory Inspections: (Identify feature of work and attach minutes).
Initial Inspections: (Identify feature of work and attach minutes).
Follow-Up Inspections: (List inspections performed, results of inspection compared to specification requirements, and corrective actions taken when deficiencies are noted).

5. Tests Performed and Test Results: (Identify test requirement by paragraph number in specifications and/or sheet number in plans).

6. Material Received: (Note inspection results and storage provided).

7. Submittals Reviewed:

(a) Submittal No.	(b) Spec/Plan Reference	(c) By Whom	(d) Action
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

8. Offsite Surveillance Activities, Including Action Taken:

9. Job Safety: (List items checked, results, instructions and corrective actions taken).

10. Remarks: (Instructions received or given. Conflict(s) in Plans and/or specifications. Delays encountered.).

Contractor's Verification: On behalf of the Contractor, I certify this report is complete and correct, and all materials and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as may be noted above.

CQC System Manager Date

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SECTION 01550

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SECTION 01550

MEASUREMENT AND PAYMENT

6/2000

SCOPE

This section covers the methods and procedures which will be used to measure the Contractor's work and to effect payment.

GENERAL

The general outline of the principal features of each item as listed does not in any way limit the responsibility of the Contractor for making a thorough investigation of the Drawings and Specifications to determine the scope of work under the entire Contract. Payment to the Contractor of the amounts based on the quantities of work as measured in accordance with the specified methods of measurement and the prices stipulated in the accepted proposal will constitute complete compensation for all work shown on the Drawings, provided in the specifications or other Contract Documents and all costs of accepting the general risks, liabilities and obligations expressed or implied. Payment under all items shall include, but not necessarily be limited to, compensation for furnishing all supervision, labor, equipment, and materials and services (including overhead and profit), as well as performing all work required to accomplish and complete the work specified under each item and all other work required. Measurement and Payment methods will apply to the appropriate pricing in Option 1 - Upstream Levee, Option 2 Upstream Levee Continuation, Option 3 Upstream Levee Continuation, Option 4 Upstream Levee Continuation, Option 5 - grade control structure and riprap Option 6 - lake mitigation excavation, as well as in the BASE BID indicated in the BIDDING SCHEDULE

LUMP SUM ITEMS

Quantities

The quantities under lump sum items will not be measured except for the purpose of determining reasonable interim payments.

Interim Payments

Interim payments will be made in accordance with the estimated value of work done as determined by the CO or as specified in this section, and in accordance with contract clause for payments.

PART 1 BID ITEM 1 Existing Levee Embankment Excavation and Placement

1.1 Work Includes

Excavation and/or removal of levee embankment materials, excavated from the existing levee and hauling, placement, and compaction where designated on

the drawings. The quantity of excavation will be measured from existing ground levels to excavation surfaces shown on the drawings or as directed by the CO.

1.1.1 Existing Ground Levels

Existing ground levels shall be surveyed prior to any disturbances in accordance with the relevant provisions of these specifications.

1.1.2 Excavation Surfaces Not Shown

In the event excavation surfaces are not clearly shown on the Drawings, the Contractor shall obtain clarification from the CO prior to commencement of excavation and/or removal.

1.1.3 Measurement

Cubic yard. Measurement of materials excavated, hauled, acceptably placed and compacted indicated on the drawings and as directed will be made in cubic yards computed on the basis of the before and after surveys of the existing levee embankment.

1.2 Payments to Contractor

Payments will be made to the Contractor and approved by for unit price items in accordance with measurements determined by CO at the unit prices entered in the proposal schedule.

1.3 Interim Measurement/Payments

Interim measurements and/or payments maybe adjusted to take account of partially completed work.

PART 2 BID ITEM 2 - COHESIVE FILL

2.1 Cohesive Fill

Work Included. The work includes all material, equipment and labor used for excavation from the designated or other approved borrow area, hauling, stockpiling, placement, and compaction, and grading of all miscellaneous cohesive fill, and all other necessary operations to excavate, haul, stock pile, place, compact, and grade all miscellaneous cohesive fill material. The Contractor shall pay Western Sand and Gravel Company (WSGC) the sum of 50 cents per cubic yard of compacted embankment cohesive fill material excavated from the designated borrow area and placed as cohesive fill. See specification section 02331A titled: Levee Embankment and Earthwork

2.2 Measurement

Cubic Yard. The quantity of cohesive fill shall be determined based on an initial and final topographic survey of the existing and final ground surface of the final cohesive fill, at the Contractor's expense. The Contractor shall establish cohesive fill elevations by surveying and mapping of the area at a minimum of 1 foot contour intervals and at all

changes in grade greater than 1 foot. The initial topographic survey the cohesive fill shall be performed after clearing, and grubbing of the cohesive fill subgrade after clearing and grubbing. A final as built topographic survey of the cohesive fill shall then be performed and mapped after the cohesive fill is complete, but prior to topsoil placement to establish the final quantity of compacted cohesive fill placed, compacted and graded. For information purposes, a factor of 1.3 was applied to the borrow area material excavated to establish the compacted in place quantity.

2.3 Payment

Applicable unit price times the number of cubic yards of satisfactory cohesive fill material acceptably placed.

PART 3 BID ITEM 3 - COHESIONLESS FILL

3.1 Work Included

Work Included. The work includes all material, equipment and labor, including all incidental and customarily performed work necessary for excavating from the designated or other approved borrow area, transporting, placing, and grading of satisfactory cohesionless fill for underwater fill and for a geotextile cushion layer. The Contractor shall pay Western Sand and Gravel Company (WSGC) the sum of 50 cents per cubic yard of cohesionless fill excavated from the off site borrow area and placed where designated on the drawings.

3.2 Measurement

Cubic Yard. The quantity of cohesionless fill shall be determined based on an initial and final topographic survey of the existing and final ground surface of the final cohesionless fill, at the Contractor's expense. The Contractor shall establish cohesionless fill elevations by surveying and mapping of the area at a minimum of 1 foot contour intervals and at all changes in grade greater than 1 foot. The initial topographic survey the cohesionless fill shall be performed after clearing, and grubbing of the cohesionless fill subgrade after clearing and grubbing. A final as built topographic survey of the cohesionless fill shall then be performed and mapped after the cohesionless fill is complete, but prior to topsoil placement to establish the final quantity of cohesionless fill placed, and graded. For information purposes, a factor of 1.2 was applied to the borrow area material excavated to establish the in place quantity.

3.3 Payment

Applicable unit price times the number of cubic yards of satisfactory cohesionless fill material acceptably placed.

PART 4 BID ITEM 4 - TOPSOIL

4.1 Work Included

For purposes of topsoil, satisfactory soil material shall be utilized as topsoil in areas designated on the drawings. The work included all

materials, equipment and labor to complete all items of work, including all excavation of topsoil from the designated or other approved borrow area, hauling of topsoil, and stockpiling or placing, and spreading of topsoil, and maintenance of topsoil in areas as shown on the drawings and specified herein.

4.2 Measurement

Cubic yard. Measurement of topsoil acceptably placed in areas indicated and as directed will be made in cubic yards computed on the basis of the specified depth of topsoil.

4.3 Payment

Applicable unit price times the number of cubic yards of topsoil, acceptably placed.

PART 5 BID ITEM 5 - STONE (RIPRAP) PROTECTION

5.1 Work Included

The work of this item shall include but not be limited to labor, equipment, materials, gradation testing, and performing all operations in connection with furnishing, transporting, and placing riprap as required by drawings and specifications.

5.2 Measurement

Per Ton. Riprap material will be measured for payment by the number of tons of riprap satisfactorily placed as specified. The riprap material shall be weighed: (1) on public or private scales which have been certified by the State. The Contractor shall furnish the Government Inspector a copy of each printed weigh bill when self printing scales are used, or a copy signed by a public or bonded weigh master as each load is delivered; or (2) riprap material may be weighed on the Contractor-furnished scales under the supervision of the Government Inspector. Each printed weigh bill shall contain the following: date, unit number, time of gross, tare and net weight, name of project, contractor, contract number and signature of bonded weigh master. All riprap material shall be weighed to the nearest 20 pounds and the net weight reduced to the nearest hundredth of a ton.

5.3 Payment

Payment for "Riprap" shall be based on the unit price per ton as indicated on the Bidding Schedule multiplied by the number of tons needed to complete the required work for riprap according to drawings and specifications.

PART 6 BID ITEM 6 - GEOTEXTILE FILTER MATERIAL

6.1 Work Included

The work of this item shall include but not be limited to labor, equipment,

materials, and performing all operations in connection with furnishing, transporting, and placing geotextile filter material as required by drawings and specifications.

6.2 Measurement

Per SY. Geotextile Filter material will be measured for payment by the square yards of geotextile filter material satisfactorily placed as specified.

6.3 Payment

Payment for "Geotextile Filter" shall be based on the unit price per square yard (SY) as indicated on the Bidding Schedule multiplied by the number of square yards needed to complete the required work for geotextile filter according to drawings and specifications.

PART 7 LEVEE SURFACING

7.1 Work Included

The work of this item shall include but not be limited to labor, equipment, materials, gradation testing, and performing all operations in connection with furnishing, transporting, and placing levee surfacing as required by drawings and specifications.

7.2 Measurement

Per Ton. Levee Surfacing material will be measured for payment by the number of tons of levee surfacing satisfactorily placed as specified. The levee surfacing material shall be weighed: (1) on public or private scales which have been certified by the State. The Contractor shall furnish the Government Inspector a copy of each printed weigh bill when self printing scales are used, or a copy signed by a public or bonded weigh master as each load is delivered; or (2) levee surfacing material may be weighed on the Contractor-furnished scales under the supervision of the Government Inspector. Each printed weigh bill shall contain the following: date, unit number, time of gross, tare and net weight, name of project, contractor, contract number and signature of bonded weigh master. All levee material shall be weighed to the nearest 20 pounds and the net weight reduced to the nearest hundredth of a ton.

7.3 Payment

Payment for "Levee Surfacing" shall be based on the unit price per ton as indicated on the Bidding Schedule multiplied by the number of tons needed to complete the required work for levee surfacing according to drawings and specifications.

PART 8 BID ITEM 8 - ALL WORK COMPLETE (Excluding Items 1 thru 7)

8.1 Work Included

The work for this item shall include but not be limited to temporary

trailer facilities; telephones; electricity; water; contractor staging areas; site preparation; insurance; performance and payment bonds; field office personnel, and Contractors supervision for the duration of the project. Other items of work include all equipment, labor, and materials needed to complete clearing, grubbing, stripping, and of unsuitable grubbed and stripped material; concrete flood walls; drainage structure modifications and removals; tilling ; fence removal and replacement; borrow area development, including clearing and grubbing; borrow area access road construction, maintenance, and removal, including the temporary access road through the sand pit lake; degradation of the temporary access road to an elevation 3 feet below the water surface upon completion of use; excavation, salvaging, and placement of existing riprap; Type A and Type B seeding; borrow area final grading; asphalt replacement at parking area; and any other incidental and customarily performed work needed to complete levee construction not covered by Bid Items 1 through 7.

8.2 Measurement

Lump sum.

8.3 Payment

Payment for "All Work Complete" shall be made on a progressive basis, based on the amount of work completed.

PART 9 OPTIONS 1a, 2a, 3a, and 4a - Cohesive Fill

9.1 Work Included

Work Included. The work includes all material, equipment and labor used for excavation from the designated or other approved borrow area, hauling, stockpiling, placement, and compaction, and grading of all miscellaneous cohesive fill, and all other necessary operations to excavate, haul, stock pile, place, compact, and grade all miscellaneous cohesive fill material.

9.1.1 Measurement

Cubic Yard. The quantity of cohesive fill shall be determined based on an initial and final topographic survey of the existing and final ground surface of the final cohesive fill, at the Contractor's expense. The Contractor shall establish cohesive fill elevations by surveying and mapping of the area at a minimum of 1 foot contour intervals and at all changes in grade greater than 1 foot. The initial topographic survey the cohesive fill shall be performed after clearing, and grubbing of the cohesive fill subgrade after clearing and grubbing. A final as built topographic survey of the cohesive fill shall then be performed and mapped after the cohesive fill is complete, but prior to topsoil placement to establish the final quantity of compacted cohesive fill placed, compacted and graded. For information purposes, a factor of 1.3 was applied to the borrow area material excavated to establish the compacted in place quantity.

9.1.2 Payment

Applicable unit price times the number of cubic yards of satisfactory

cohesive fill material acceptably placed.

PART 10 OPTIONS 1b, 2b, 3b, and 4b - Topsoil

10.1 Work Included

For purposes of topsoil, satisfactory soil material shall be utilized as topsoil in areas designated on the drawings. The work included all materials, equipment and labor to complete all items of work, including all excavation of topsoil from the designated or other approved borrow area, hauling of topsoil, and stockpiling or placing, and spreading of topsoil, and maintenance of topsoil in areas as shown on the drawings and specified herein.

10.2 Measurement

Cubic yard. Measurement of topsoil acceptably placed in areas indicated and as directed will be made in cubic yards computed on the basis of the specified depth of topsoil.

10.3 Payment

Applicable unit price times the number of cubic yards of topsoil, acceptably placed.

PART 11 OPTION 1c, 2c, 3c, and 4c - Levee Surfacing

11.1 Work Included

The work of this item shall include but not be limited to labor, equipment, materials, gradation testing, and performing all operations in connection with furnishing, transporting, and placing levee surfacing as required by drawings and specifications.

11.2 Measurement

Per Ton. Levee Surfacing material will be measured for payment by the number of tons of levee surfacing satisfactorily placed as specified. The levee surfacing material shall be weighed: (1) on public or private scales which have been certified by the State. The Contractor shall furnish the Government Inspector a copy of each printed weigh bill when self printing scales are used, or a copy signed by a public or bonded weigh master as each load is delivered; or (2) levee surfacing material may be weighed on the Contractor-furnished scales under the supervision of the Government Inspector. Each printed weigh bill shall contain the following: date, unit number, time of gross, tare and net weight, name of project, contractor, contract number and signature of bonded weigh master. All levee material shall be weighed to the nearest 20 pounds and the net weight reduced to the nearest hundredth of a ton.

11.3 Payment

Payment for "Levee Surfacing" shall be based on the unit price per ton as indicated on the Bidding Schedule multiplied by the number of tons needed

to complete the required work for levee surfacing according to drawings and specifications.

PART 12 Option 5a - COHESIONLESS FILL

12.1 Work Included

The work includes all material, equipment and labor, including all incidental and customarily performed work necessary for excavating from the designated or other approved borrow area, transporting, placing, and grading of satisfactory cohesionless fill for underwater fill and for a geotextile cushion layer. The Contractor shall pay Western Sand and Gravel Company (WSGC) the sum of 50 cents per cubic yard of cohesionless fill excavated from the off site borrow area and placed where designated on the drawings.

12.2 Measurement

Cubic Yard. The quantity of cohesionless fill shall be determined based on an initial and final topographic survey of the existing and final ground surface of the final cohesionless fill, at the Contractor's expense. The Contractor shall establish cohesionless fill elevations by surveying and mapping of the area at a minimum of 1 foot contour intervals and at all changes in grade greater than 1 foot. The initial topographic survey the cohesionless fill shall be performed after clearing, and grubbing of the cohesionless fill subgrade after clearing and grubbing. A final as built topographic survey of the cohesionless fill shall then be performed and mapped after the cohesionless fill is complete, but prior to topsoil placement to establish the final quantity of cohesionless fill placed, and graded. For information purposes, a factor of 1.2 was applied to the borrow area material excavated to establish the in place quantity.

12.3 Payment

Applicable unit price times the number of cubic yards of satisfactory cohesionless fill material acceptably placed.

PART 13 OPTION 5b - STONE (RIPRAP) PROTECTION

13.1 Work Included

The work of this item shall include but not be limited to labor, equipment, materials, gradation testing, and performing all operations in connection with furnishing, transporting, and placing riprap as required by drawings and specifications.

13.2 Measurement

Per Ton. Riprap material will be measured for payment by the number of tons of riprap satisfactorily placed as specified. The riprap material shall be weighed: (1) on public or private scales which have been certified by the State. The Contractor shall furnish the Government Inspector a copy of each printed weigh bill when self printing scales are used, or a copy signed by a public or bonded weigh master as each load is

delivered; or (2) riprap material may be weighed on the Contractor-furnished scales under the supervision of the Government Inspector. Each printed weigh bill shall contain the following: date, unit number, time of gross, tare and net weight, name of project, contractor, contract number and signature of bonded weigh master. All riprap material shall be weighed to the nearest 20 pounds and the net weight reduced to the nearest hundredth of a ton.

13.3 Payment

Payment for "Riprap" shall be based on the unit price per ton as indicated on the Bidding Schedule multiplied by the number of tons needed to complete the required work for riprap according to drawings and specifications.

PART 14 OPTION 5C - GEOTEXTILE FILTER MATERIAL

14.1 Work Included

The work of this item shall include but not be limited to labor, equipment, materials, and performing all operations in connection with furnishing, transporting, and placing geotextile filter material as required by drawings and specifications.

14.2 Measurement

Per SY. Geotextile Filter material will be measured for payment by the square yards of geotextile filter material satisfactorily placed as specified.

14.3 Payment

Payment for "Geotextile Filter" shall be based on the unit price per square yard (SY) as indicated on the Bidding Schedule multiplied by the number of square yards needed to complete the required work for geotextile filter according to drawings and specifications.

PART 15 OPTION 5D - LEVEE SURFACING

15.1 Work Included

The work of this item shall include but not be limited to labor, equipment, materials, gradation testing, and performing all operations in connection with furnishing, transporting, and placing levee surfacing as required by drawings and specifications.

15.2 Measurement

Per Ton. Levee Surfacing material will be measured for payment by the number of tons of levee surfacing satisfactorily placed as specified. The levee surfacing material shall be weighed: (1) on public or private scales which have been certified by the State. The Contractor shall furnish the Government Inspector a copy of each printed weigh bill when self printing scales are used, or a copy signed by a public or bonded weigh master as

each load is delivered; or (2) levee surfacing material may be weighed on the Contractor-furnished scales under the supervision of the Government Inspector. Each printed weigh bill shall contain the following: date, unit number, time of gross, tare and net weight, name of project, contractor, contract number and signature of bonded weigh master. All levee material shall be weighed to the nearest 20 pounds and the net weight reduced to the nearest hundredth of a ton.

15.3 Payment

Payment for "Levee Surfacing" shall be based on the unit price per ton as indicated on the Bidding Schedule multiplied by the number of tons needed to complete the required work for levee surfacing according to drawings and specifications.

PART 16 OPTION 5e - SHEET PILE

16.1 Work Included

For purposes of sheet pile, satisfactory sheet pile material shall be utilized as sheet pile in areas designated on the drawings. The work included all materials, equipment and labor to complete all items of work, including all excavation, and placing of sheet pile in areas as shown on the drawings and specified herein.

16.2 Measurement

Square Feet. Measurement of sheet pile acceptably placed in areas indicated and as directed will be made in square feet computed on the basis of the specified area of sheet pile.

16.3 Payment

Applicable unit price times the number of square feet of sheet pile, acceptably placed.

PART 18 OPTION 5f - BEDDING

17.1 Work Included

The work of this item shall include but not be limited to labor, equipment, materials, gradation testing, and performing all operations in connection with furnishing, transporting, and placing bedding as required by drawings and specifications.

17.2 Measurement

Per Ton. Bedding material will be measured for payment by the number of tons of bedding satisfactorily placed as specified. The bedding material shall be weighed: (1) on public or private scales which have been certified by the State. The Contractor shall furnish the Government Inspector a copy of each printed weigh bill when self printing scales are used, or a copy signed by a public or bonded weigh master as each load is delivered; or (2) bedding material may be weighed on the

Contractor-furnished scales under the supervision of the Government Inspector. Each printed weigh bill shall contain the following: date, unit number, time of gross, tare and net weight, name of project, contractor, contract number and signature of bonded weigh master. All riprap material shall be weighed to the nearest 20 pounds and the net weight reduced to the nearest hundredth of a ton.

17.3 Payment

Payment for "Bedding" shall be based on the unit price per ton as indicated on the Bidding Schedule multiplied by the number of tons needed to complete the required work for bedding according to drawings and specifications.

PART 18 OPTION 6a - Lake Mitigation Excavation

18.1 Work Included

Work Included. The work includes all material, equipment and labor used for excavation of materials in the area designated on the drawings as "Lake Mitigation Area", hauling, stockpiling, and placement of excavated materials in the areas designated on the drawings.

18.2 Measurement

Cubic Yard. The quantity of lake mitigation excavation shall be determined based on an initial and final topographic survey of the existing and final ground surface of the lake mitigation area, at the Contractor's expense. The Contractor shall establish excavation elevations by surveying and mapping of the area at a minimum of 1 foot contour intervals and at all changes in grade greater than 1 foot. A final as built topographic survey of the lake mitigation area shall then be performed and mapped after the excavation is complete.

18.3 Payment

Applicable unit price times the number of cubic yards of satisfactory excavation acceptably performed.

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SECTION 01562

(NEBRASKA) NPDES PERMIT REQUIREMENTS FOR STORM WATER DISCHARGES FROM
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08/99

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SECTION 01562

(NEBRASKA) NPDES PERMIT REQUIREMENTS
FOR STORM WATER DISCHARGES
FROM CONSTRUCTION SITES
08/99

PART 1 GENERAL

Attachments: Copy of the "Authorization To Discharge Under The State Of
Nebraska
National Pollutant Discharge Elimination System (NPDES)
NPDES Permit Number NER100000

1.1 REFERENCES (NOT APPLICABLE)

1.2 SUBMITTALS

Government approval is required for submittals with a "GA" designation;
submittals having an no designation are for information only. The
following shall be submitted in accordance with Section 01330 SUBMITTAL
PROCEDURES:

SD-05 Design Data

Notice of Intent;

Notice of Start-up of Construction Activity;

Storm Water Pollution Prevention Plan; G-DO

Notice of Completion of Construction Activity;

SD-06 Test Reports

Records

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 GENERAL

The Contractor shall be responsible for implementing the terms and
requirements of the attached "Authorization To Discharge Under The State Of
Nebraska National Pollutant Discharge Elimination System (NPDES)", Permit
No. NER100000, for storm water discharges from construction sites. The
Contractor shall be considered the "permittee". All submissions to the
state shall be by certified mail. Copies of the return receipt for each

submission shall be included with the submittal to the Contracting Officer's Representative (COR). The project site is not located in designated critical habitat and there are no known "listed species" located in the project area.

3.2 IMPLEMENTATION

3.2.1 Notice of Intent

The Contractor shall complete and submit a Notice of Intent (NOI) in accordance with NPDES Permit No. NER100000. A copy of the submitted NOI shall be furnished to the COR at least 10 calendar days prior to the commencement of construction activities.

3.2.2 Notice of Start-up of Construction Activity

The Contractor shall complete and submit a Notice of Start-up of Construction Activity in accordance with NPDES Permit No. NER100000. A copy of the submitted Notice of Start-up of Construction Activity shall be furnished to the COR not more than 10 calendar days after commencement of construction activities.

3.2.3 Storm Water Pollution Prevention Plan

The Contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) in accordance with NPDES Permit No. NER100000. Any temporary or permanent erosion and sedimentation control measures shown on the drawings shall be incorporated into the Contractor's SWPPP. Two copies of the SWPPP shall be submitted to the COR at least 21 calendar days prior to the commencement of construction activities. Copies of all revisions to the SWPPP shall also be submitted.

3.2.4 Inspections and Record Keeping

The Contractor shall be responsible for all inspections, maintenance, and record keeping required under the NPDES Permit No. NER100000. Copies of all inspection and maintenance records shall be furnished to the COR.

3.2.5 Notice of Completion of Construction Activity

The Contractor shall complete and submit a Notice of Completion of Construction Activity in accordance with NPDES Permit No. NER100000. A copy of the submitted Notice of Start-up of Construction Activity shall be furnished to the COR not more than 10 calendar days after submission to the State.

3.2.6 Renotification

If the current permit expires prior to completion of construction, the Contractor shall apply for a reissuance of NPDES Permit No. NER100000. A copy of all submissions to the State shall be furnished to the COR.

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SECTION 02231

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07/02

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-- End of Section Table of Contents --

SECTION 02231

CLEARING, GRUBBING AND STRIPPING
07/02

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Materials Other Than Salable Timber; G-AO

Written permission to dispose of such products on private property shall be filed with the Contracting Officer.

1.2 DELIVERY, STORAGE, AND HANDLING

Deliver materials to, store at the site, and handle in a manner which will maintain the materials in their original manufactured or fabricated condition until ready for use.

PART 2 PRODUCTS

2.1 TREE WOUND PAINT

Bituminous based paint of standard manufacture specially formulated for tree wounds.

PART 3 EXECUTION

3.1 PROTECTION

3.1.1 Roads and Walks

Keep roads and walks free of dirt and debris at all times.

3.1.2 Trees, Shrubs, and Existing Facilities

Trees and vegetation to be left standing shall be protected from damage incident to clearing, stripping, and grubbing, and construction operations by the erection of barriers or by such other means as the circumstances require.

3.1.3 Utility Lines

Protect existing utility lines that are indicated to remain from damage. Notify the Contracting Officer immediately of damage to or an encounter with an unknown existing utility line. The Contractor shall be responsible for the repairs of damage to existing utility lines that are indicated or made known to the Contractor prior to start of clearing and grubbing operations. When utility lines which are to be removed are encountered within the area of operations, the Contractor shall notify the Contracting Officer in ample time to minimize interruption of the service.

3.2 CLEARING AND STRIPPING

Clearing and stripping shall consist of the stripping of the top 6 inches of soil and vegetation, and the felling, trimming, and cutting of trees into sections and the satisfactory disposal of the trees and other vegetation designated for removal, including downed timber, snags, brush, and rubbish occurring within the areas to be cleared. Clearing shall also include the removal and disposal of structures that obstruct, encroach upon, or otherwise obstruct the work. Trees, stumps, roots, brush, and other vegetation in areas to be cleared shall be cut off flush with or below the original ground surface, except such trees and vegetation as may be indicated or directed to be left standing. Trees designated to be left standing within the cleared areas shall be trimmed of dead branches 1-1/2 inches or more in diameter and shall be trimmed of all branches the heights indicated or directed. Limbs and branches to be trimmed shall be neatly cut close to the bole of the tree or main branches.

3.3 TREE REMOVAL

Where indicated or directed, trees and stumps that are designated as trees shall be removed from all work areas within 15 feet of the levee foot print, including levee, concrete L-Wall, drainage structures, sheet pile, and riprap areas. This work shall include the felling of such trees and the removal of their stumps and roots as specified in paragraph GRUBBING. Trees shall be disposed of as specified in paragraph DISPOSAL OF MATERIALS.

3.4 PRUNING

Trim trees designated to be left standing within the cleared areas of dead branches 1 1/2 inches or more in diameter; and trim branches to heights and in a manner as indicated. Neatly cut limbs and branches to be trimmed close to the bole of the tree or main branches. Paint cuts more than 1 1/4 inches in diameter with an approved tree wound paint.

3.5 GRUBBING

Grubbing shall consist of the removal and disposal of stumps, roots larger than 1-1/2 inches in diameter, and matted roots from the designated grubbing areas. Material to be grubbed, together with logs and other organic or metallic debris not suitable for foundation purposes, shall be removed to a depth of not less than 18 inches below the original surface level of the ground in areas indicated to be grubbed and in areas indicated as

construction areas under this contract, such as areas for new levees, flood walls, drainage structures, and riprap. Depressions made by grubbing shall be filled with suitable material and compacted to make the surface conform with the original adjacent surface of the ground.

3.6 DISPOSAL OF MATERIALS

3.6.1 Saleable Timber

All timber on the project site noted for clearing and grubbing shall become the property of the Contractor, and shall be removed from the project site and disposed at the Contractor's expense. All timber cleared and grubbed from the designated borrow area can either be disposed off siton the project site noted for clearing and grubbing shall become the property of the Contractor, and shall be removed from the project site and disposed at the Contractor's expense.

3.6.2 Nonsaleable Materials

Logs, stumps, roots, brush, rotten wood, and other refuse from the clearing and grubbing operations, except for salable timber, shall be disposed of outside the limits of Government-controlled land at the Contractor's responsibility, except when otherwise directed in writing. Such directive will state the conditions covering the disposal of such products and will also state the areas in which they may be placed. Absolutely no tree burning is allowed on National Guard Camp property, however, tree burning is allowed on the designated borrow area site. All timber cleared and grubbed from the designated borrow area shall become the property of the Contractor, and shall be removed from the project site and disposed at the Contractor's expense or piled and burned on the designated borrow site at the Contractor's expense. If the Contractor elects to burn trees and grubbed material, the Contractor shall obtain a burn permit from the Ashland City Hall and the Ashland Fire Department Chief - Rich Grauerholz. The phone Number for the Ashland City Hall is 402- 944-3397.

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SECTION 02245

STONE (RIPRAP) PROTECTION

04/00

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.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 88 (1990) Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)

AASHTO T 103 (1991) Soundness of Aggregates by Freezing and Thawing

ARMY CORPS OF ENGINEERS (COE)

COE CRD-C 100 (1975) Sampling Concrete Aggregate and Aggregate Sources, and Selection of Material for Testing

COE CRD-C 107 (1994) Specific Gravity and Absorption of Coarse Aggregate

1.2 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-09 Reports

Initial Sampling and Testing; G-AO

Field Gradation; G-AO.

Field Gradation Test Results mailed within ten (10) days after completion of the tests.

1.3 GENERAL

The work specified herein consists of construction of stone protection as

shown on the drawings and as directed by the Contracting Officer's Representative. Stone protection material shall consist of all stone to be furnished for riprap and bedding material. The Contractor shall control operations during production of stone protection material so as to insure that the material delivered and placed will meet all specification requirements. The quarry operators shall be responsible for operating all quarries and for conditioning the area after operations are complete, in accordance with all applicable Federal, State, and local laws and regulations.

1.4 SAMPLING AND TESTING

1.4.1 General Requirements

The Contractor shall be responsible for all sampling and testing specified herein. The Government may perform verification tests as determined necessary for final approval of the stone protection material. All samples including samples taken during production shall be representative of the stone protection material furnished or proposed to be furnished. Samples shall be taken in accordance with COE CRD-C 100 or other approved method. No rock shall be furnished from any ledge which has not been sampled, tested, and approved for use on this project.

1.4.2 Test Results

Results shall verify that materials comply with this specification. When a material source is changed, the new material will be tested for compliance.

When deficiencies are found, the initial analysis shall be repeated and the material already placed shall be retested to determine the extent of unacceptable material. All in-place unacceptable material shall be replaced or modified as directed by the Contracting Officer's Representative.

1.4.3 Initial Sampling and Testing

Tests for bulk specific gravity, soundness in magnesium sulfate, and soundness in freezing and thawing shall be performed on samples of material obtained from each ledge proposed for use as stone protection prior to start of construction. Test results shall describe type of failure of the discrete particles. Tests for these parameters do not need to be performed specifically for this project; however, certified test results performed not longer than 12 months prior to delivery to the project together with the name of the owner of the quarry and the legal description shall be submitted to the Contracting Officer's Representative. The Contractor shall submit the name and location of each quarry proposed for use along with a geologic section of each quarry indicating the various rock units identified by geologic name of formation and member and indicate from what ledge the samples were obtained.

1.4.3.1 Bulk Specific Gravity

Bulk specific gravity shall be computed in accordance with COE CRD-C 107 except that the total sample shall weigh 5000 grams +2 percent and individual particles shall weigh approximately 300 grams each. Stone

protection material shall be tested in a saturated surface-dry (SSD) condition. The computed bulk specific gravity so determined shall not be less than 2.55.

1.4.3.2 Soundness in Magnesium Sulfate

Soundness in magnesium sulfate shall be determined according to ASTM C 88 with test modifications as listed below. The combined loss at 5 cycles shall be not more than 8 percent. The test report shall show the percentages of loss calculated as described herein and the number of pieces affected, classified as to number disintegrating, splitting, crumbling, cracking, flaking, etc.

a. Sample Preparation

The sample shall be prepared by breaking it into fragments reasonably uniform in size and shape and weighing approximately 100 grams each. The test sample shall weigh 5000 grams +/- 2 percent. The sample shall be thoroughly washed and dried previous to test as described for coarse aggregate.

b. Sample Immersion and Temperature

The sample immersed in the solution shall be maintained at a temperature of 80 degrees F +/- 2 degrees F for the immersion period.

c. Quantitative Examination

At the end of the fifth cycle, the percentage loss shall be determined by the three following methods. The test report shall show the loss computed by each method; however, only the combined loss shall be used for acceptance or rejection of the material.

d. Loss By Breaking

An individual piece which has broken or split into three or more fragments shall be considered to have failed the test, provided each of the three such fragments is at least 10 percent of the original piece by weight. The total original weight of all pieces failing the test, expressed as percentage of the total original weight of the sample, shall be considered as percentage loss by breaking.

e. Loss By Crumbling and Flaking

After the loss by breaking has been determined, the pieces that have not failed in that determination shall be screened on the 1/2-inch sieve and the material retained on the sieve shall be weighed for purposes required to determine combined losses. The pieces which have failed by breaking shall then be added to the material remaining on the 1/2-inch sieve and screened. The difference between the total original weight of the sample and the total weight of the material retained on the 12.5 mm sieve expressed as percentage of the total original weight, shall be considered as percentage loss by crumbling and flaking.

f. Combined Loss

The difference between the total original weight of the sample and the weight of the material retained on the 1/2-inch sieve, after screening the pieces which did not fail by breaking, expressed as percentage of the total original weight, shall be considered as percentage combined loss.

1.4.3.3 Soundness in Freezing and Thawing

The test for freezing and thawing shall consist of AASHTO T 103, Ledge Rock Method, Procedure C, modified as indicated below. The loss at 20 cycles shall not exceed 25.0 percent. The test report shall describe the type of failure of the discrete particles.

a. Temperature

The temperature of the surrounding medium during freezing shall be maintained in the range of -20 to -10 degrees F.

b. Freeze/Thaw Cycle

The length of a freezing and thawing cycle shall be sufficient to totally freeze and totally thaw each piece of the same during each cycle. The laboratory shall specifically determine for each sample that the cycle used is sufficient to accomplish total freezing and total thawing and shall report this in the test report. However, in no case shall the cycle consist of less than 2-1/2 hours of freezing followed by 1 hour of thawing.

The sample shall be held in the frozen condition whenever necessary to break the cycle (overnight, weekends, etc.).

1.4.3.4 Immersion

Procedure C, Partial Immersion shall be used, except that soaking prior to testing shall be in accordance with Procedure A.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 General Requirements

All stone for stone protection shall be durable quarried rock as approved by the Contracting Officer's Representative. Individual pieces of stone protection in-place shall be free from cracks, seams, and other defects that will cause rapid or excessive deterioration or degradation during service. The bulk stone protection material delivered to the project shall be of such quality that tests performed on representative samples have results within the limits specified. The stone protection shall contain not more than 5 percent of undesirable material by weight. Undesirable material is defined as individual pieces of stone which do not meet the quality requirements when tested as specified herein and which can be visually differentiated from the satisfactory pieces, plus dirt, sand, clay, and rock fines. Stone protection material shall not contain disintegrated granite or shale. The Contractor shall select the source or

sources he proposes to use and perform the initial sampling and testing of the materials well in advance of the time when the material will be required in the work.

2.1.2 Riprap

The riprap shall consist of stone meeting the requirements specified herein and shall be in pieces approximately rectangular in cross section, free from thin slabby pieces having a maximum dimension more than four times the least dimension. Stone for riprap shall be reasonably well graded from coarse to fine. Dirt and fines of less than 1/2-inch maximum cross section, accumulated from interledge layers or from blasting or handling operations shall not exceed 5 percent by weight.

2.1.2.1 Riprap Weight Limitations

The riprap shall be reasonably well-graded. Selected points from the limiting gradation curves for each riprap thickness are shown on the tables below.

15" Riprap Depth

Percent Lighter by Weight	Limit of Stone Weight in Lbs.	Size in Approx. Spherical Diameter(in)	
		Maximum	Minimum
100	109-65	13	11
50	48-33	10	9
10	24-10	8	6

27" Riprap Thickness

Percent Lighter by Weight	Limit of Stone Weight in Lbs.	Size in Approx. Spherical Diameter(in)	
		Maximum	Minimum
100	695-275	24	18
50	205-135	16	14
15	105-40	13	9

33" Riprap Depth

Percent Lighter by Weight	Limit of Stone Weight in Lbs.	Size in Approx. Spherical Diameter(in)	
		Maximum	Minimum
100	516-206	22	16
50	218-103	17	13
10	109-32	13	9

2.1.3 Bedding Material

Bedding material shall be at least equal in quality to that of the stone used for riprap and shall be well graded between the sizes specified. Bedding material shall be quarried stone, crushed cobbles, and crushed gravel consisting of particles having at least one fractured face. The material shall be composed of tough, durable particles, shall be reasonably free from thin, flat and elongated pieces, and shall contain no organic matter nor soft, friable particles in quantities considered objectionable by the Contracting Officer.

2.1.3.1 Bedding Gradation for Riprap

Specified bedding gradation requirements shall apply to the completed bedding material. The bedding material shall be continuously graded within the following limits:

2.1.3.2 Bedding Gradation for Riprap

Specified bedding gradation requirements shall apply to the completed bedding material. The bedding material shall be continuously graded within the following limits:

Bedding for

Sieve Designation	Percentage by Weight Passing Square-mesh Sieve
3/4"	90-100
#4	65-85
#16	20-60
#200	0-10

PART 3 EXECUTION

3.1 GENERAL

Quarry operations shall be controlled to produce a reasonably well-graded stone of required size, and the Contracting Officer may require changes as necessary to produce the required product. The Contractor's operations shall be conducted in a manner that will produce stone meeting the requirements specified and shall include selective quarrying, handling, and loading as required. Materials composed of the specified gradation and properties shall be placed on the prepared subgrade where indicated on the drawings.

3.2 PLACEMENT

3.2.1 Bedding

Bedding material shall be spread uniformly on the prepared subgrade in a satisfactory manner to the slope lines, thickness, and grades indicated on the drawings or as directed. Placing of material by methods which will tend to segregate particle sizes within the bedding will not be permitted. Any damage to the surface of the bedding foundation during placing of the

bedding shall be repaired before proceeding with the work. Compaction of the bedding material will not be required but it shall be finished to present a reasonably even surface free from depressions, mounds, or windrows.

3.2.2 Riprap

Riprap shall be placed within the limits shown on the drawings or as directed by the Contracting Officer's Representative. Riprap stone shall be placed in such manner as to produce a reasonably well-graded mass of rock with the minimum practicable percentage of voids. Riprap shall be placed to its full course thickness in one operation and in such manner as to avoid damage to the geotextile filter material or to unacceptably disturb the bedding material and to minimize segregation of the riprap. The larger stones shall be well distributed and the entire mass of stones in their final position shall be roughly graded to conform to the gradation specified. The finished riprap shall be free from objectionable pockets of small stones and clusters of larger stones. Placing riprap in layers will not be permitted. The desired distribution of the various sizes of stones throughout the mass shall be obtained by selective loading of the material at the quarry or other source; by controlled dumping of successive loads during final placing and placement. All stone shall be placed by means of clam, orange peel, or skip box. However, zero drop height placement procedures are to be utilized for riprap stone to avoid displacing or damaging the underlying bedding. Dumping of stone at the top of slopes and rolling or pushing into place will not be permitted. Manipulating or moving stone at any time prior to placement by means of dozers or other blade equipment will not be permitted. Rearranging of individual stones by mechanical equipment or by hand will be required to the extent necessary to obtain a reasonably well graded distribution of stone sizes as specified above.

3.3 FIELD GRADATION

3.3.1 General

If the material fails to meet the gradation limits specified, the Contractor shall discontinue placement of the material and adjust his operations or he shall propose another source. The Contractor shall verify with the necessary additional tests that acceptable materials are being produced. Tests which do not pass the gradation requirements will not be counted in the additional required tests above. All field tests will be performed by the Contractor at his expense.

3.3.2 Riprap

A field gradation test of riprap material shall be performed by the Contractor to determine if the material as delivered to the job meets the gradation requirements of this specification. A sample consisting of 2-4 tons shall be taken of material delivered to the job and checked for gradation and elongation. The Contractor shall state in writing the method used in blasting, processing, loading, and handling this sample, and shall notify the Contracting Officer's Representative any time any production methods are changed. Riprap material shall not be placed until the

material delivered to the job has passed a field gradation test. Gradation shall be determined according to ASTM D 5519. At the discretion of the Contracting Officer's Representative, random loads will be dumped or the in-place material will be sampled and a gradation control check shall be performed by the Contractor at the discretion and under the supervision of the Contracting Officer's Representative.

3.4 PROTECTION

The Contractor shall maintain the bedding and riprap until accepted and any material displaced by any cause shall be replaced at his expense to the lines and grades shown on the drawings.

-- End of Section --

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SECTION 02310

DRAINAGE STRUCTURES FOR LEVEES

01/99

PART 1 GENERAL

1.1 SUMMARY OF WORK

The work covered by this section consists of furnishing all plant, labor, equipment, supplies and materials and performing all operations necessary to construct the gatewell structure, install the reinforced, precast concrete pipe, flap gates, timber piling at the outlet structures, and related work as shown on the drawings and specified herein.

1.2 GENERAL

The kind, size, and the location, grade, length and alignment of structures are indicated on the drawings; except that the Contracting Officer may direct some change in grade, length and alignment to accommodate field conditions.

1.3 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.

AMERICAN SOCIETY FOR TESTING AND MATERIALS PUBLICATIONS (ASTM)

ASTM A 126	(1995) Gray Iron Castings for Valves, Flanges, and Pipe Fittings
ASTM A 153	(1995) Zinc Coating (Hot-Dip) on Iron & Steel Hardware
ASTM A 307	Carbon Steel Bolts and Sturdy, 60,000 PSI Tensile Strength
ASTM A 563	(1994) Carbon & Alloy Steel Nuts
ASTM C 76	(2003) Reinforced Concrete Culvert, Storm Drain and Sewer Pipe
ASTM C 361	(1990) Reinforced Concrete Low-Head Pressure Pipe

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
(AASHTO)

AASHTO M 170 (1985) Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe

AMERICAN NATIONAL STANDARDS INSTITUTES (ANSI)

ANSI B 18.2.2 (R1993) Square and Hex Nuts (Insch Series)

STEEL STRUCTURES PAINTING COUNCIL SPECIFICATIONS (SSPC)

SSPC Paint 16 (2000) Coal Tar Epoxy-Polyamide Black (or Dark Red) Paint

SSPC Paint 20 (2002) Zinc-Rich Primers (Type I - Inorganic & Type II - Organic)

SSPC Paint 27 (2000) Basic Zinc Chromate-Vinyl Butyryl Wash Primer

SSPC SP 1 (2000) Solvent Cleaning

1.4 GUARANTEE

The Contractor shall guarantee that work executed under this section of the specification will be free from defects in material and workmanship for a period of one year from the date of beneficial use or final acceptance, whichever is earlier. Upon receipt of notice from the Government or failure of the guaranteed work or materials during the guaranteed period, the affected work or material shall be replaced promptly at the expense of the Contractor.

1.5 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 shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Precast Concrete Pipe; G-DO

Reinforced concrete pipe including joint details.

Flap Gates; G-AO

Including appurtenances.

Steel and Metal Assemblies; G-DO

Frames, Bolts, and all other fabricated metal items.

SD-06 Test Reports

Precast Concrete Pipe;

Testing;

Certified copies of laboratory test reports, including all test data.
Copies of field tests shall also be submitted.

SD-07 Certificates

Dewatering;

Water-Filled Pipe Test Procedure; G-DO

Method intended to be used.

Materials;

Manufacturer's Certification of Compliance, that all materials used on this project meet the requirements of the specification under which it is furnished.

Certified copies of welders qualification test records showing qualification in accordance with AWS D1.1 and/or AWS D1.2.

PART 2 PRODUCTS

2.1 MATERIALS

Materials shall conform to the requirements of the following.

2.1.1 Structural Steel

ASTM A 36.

2.1.2 Cast Iron Gate Leaves, Frames, Guides and Thimbles

Shall conform to ASTM A 126. Class B.

2.1.3 Bolts

Shall conform to ASTM A 307 galvanized in accordance with ASTM A 153.

2.1.4 Nuts

Shall conform to ASTM A 563 Grade A and shall be a square hex Type meeting ANSI B 18.2.2; all nuts shall be galvanized in accordance with ASTM A 153.

2.1.5 Washers

Shall be plain, round, hardened, and galvanized.

2.1.6 Paints

Shall conform to the following specifications:

2.1.6.1 Coal-tar Paints for Cast-iron Flap Gates

The paint shall conform to Specification SSPC Paint 16.

2.1.6.2 Coal-tar Paints for Steel Flap Gates

The paint shall conform to Specification SSPC Paint 16.

2.1.6.3 Paint Certification

The Contractor shall furnish certification from the manufacturer of the paint that each type used conforms completely to the requirements of the applicable specifications.

2.1.7 Concrete

Concrete and Reinforcing Steel shall conform to the requirements of SECTIONS: 03300.

2.1.8 Precast Concrete Pipe

Shall conform to ASTM C 76 and AASHTO M 170, class as shown on the drawings, Wall B minimum. The pipe joints and rubber gaskets shall conform to ASTM C 361. The rubber gasket shall be the Confined "O" Ring Type.

2.1.9 Headwalls

Construction shall be of reinforced concrete, as indicated.

PART 3 EXECUTION

3.1 STEEL AND METAL ASSEMBLIES

All structural metal and allied metal assemblies shall be provided in accordance with the dimensions, lines and grades shown on the drawings. All connecting elements as welds, bolted connections and other joints shall be secure and permanent. All steel assemblies shall be galvanized after fabrication unless noted otherwise.

3.1.1 Galvanizing

Galvanizing shall be in accordance with ASTM A 123. Galvanizing shall be applied after fabrication.

3.1.1.1 Regalvanizing

Major damage to galvanizing on items furnished by the Contractor under this contract as a result of moving, handling and installation shall be repaired by and at the expense of the Contractor. Major damage shall be considered to be crushed or chipped-off zinc coating, and worn spots caused by abrasion which exceeds 1 square inch in area shall be regalvanized in the shop or factory by removing the zinc coating of the damaged area, acid stripped and the base metal prepared prior to regalvanizing.

3.1.1.2 Field Repair

Slight damage to galvanizing on items furnished by the Contractor under this contract as a result of construction operations shall be repaired by and at the expense of the Contractor. Slight damage shall be considered to be crushed or chipped-off zinc coating and worn spots caused by abrasion on small localized areas not exceeding 1 square inch in area. Damaged areas shall be carefully cleaned and touched up with two coats of SSPC Paint 20, Type II, or other approved zinc-rich paint.\

3.1.1.3 Field or Shop Repair Option

Galvanizing damaged during shop or field fabrication by welding or cutting and unable to be regalvanized shall be shop or field painted (at the Contractor's option and expense) with two coats of galvanizing repair paint or two coats of zinc dust primer as specified herein.

3.2 EXCAVATION AND BACKFILL OF STRUCTURES

3.2.1 Excavation

Excavation shall extend a sufficient distance from structures and footings for placing and removing shoring and forms, and performing all work in the excavations, except where concrete for walls and footings is authorized to be deposited directly against excavated surfaces. Excavation for culverts shall be at least one foot outside of the horizontal diameter. All excavation slopes made for structures shall be a minimum of one vertical to one horizontal and satisfy provisions for safety as outlined in Section 23:

EXCAVATIONS of EM 385-1-1, Safety and Health Requirements Manual. If an unsuitable foundation is encountered at the indicated bottom grade, the Contractor will be directed to remove unsatisfactory material and place approved backfill up to the indicated grade with the possible use of a concrete cradle, in which event the contract price will be adjusted in accordance with Contract Clause titled: CHANGES, except that no adjustment will be made where required removal and replacement is shown on the drawings. Where excavation depths are inadvertently carried below the elevations indicated on the drawings, the excess excavation for structures shall be backfilled and compacted as directed by the Contracting Officer at no additional cost to the Government. The station position as designated may be varied to fit field conditions.

3.2.1.1 Trench Excavation

The trench below the top of the pipe shall not be excavated wider than the outside diameter of the pipe plus 36 inches. Where trench widths are exceeded, redesign using stronger pipe or special installation procedures shall be necessary. Cost of this redesign and increased cost of pipe or installation shall be borne by the Contractor without additional cost to the Government. Trench walls below the top of the pipe shall be vertical or may be sloped as allowed by the pipe manufacturer's installation manual. Trench walls above the top of pipe may be sloped or widened as necessary for the proper performance of the work.

3.2.1.2 Dewatering

All excavations, and the area immediately surrounding each excavation shall be continually and effectively drained. All excavation areas shall be kept free from water before any concrete or backfill is placed therein. If the Contractor excavates below the prevailing ground water level for any structure, he shall lower the ground water by well points or by other means approved by the Contracting Officer to at least one (1) foot below the bottom of the excavation, and maintain this level until the concrete is deposited and set or the backfill is placed, or as directed by the Contracting Officer. All water generated from dewatering activities shall be disposed of in accordance with SECTION 01355 PARAGRAPH: ENVIRONMENTAL PROTECTION. The Contractor shall submit to the Contracting Officer for approval, the method intended to be used for dewatering the area before commencing excavation.

3.2.2 Backfill

Backfill shall consist of impervious material free from large clods, frozen lumps, foreign materials and stones with a maximum dimension of three inches. Fill levels shall be kept at the approximate same elevation on both sides to avoid imposing unequal stresses on the structures. Layers of material at structure areas inaccessible to rollers and along sides and tops of culverts in cuts shall be not more than four (4) inches in uncompacted thickness and shall be compacted by use of approved mechanical tampers to the degree of compaction as specified for embankment fills in SECTION: 02331A LEVEE EMBANKMENT AND EARTHWORK. Successive blows of the mechanical tamper shall overlap not less than one-quarter (1/4) of the width of the tamper head. Four-inch layers shall be brought up to the elevation of the natural ground in cut sections. In fill sections, four-inch layers shall be placed adjacent to structures and shall be brought up to an elevation 24 inches above the top of culverts with the backfill sloped a sufficient distance out from the culvert to ensure that no movement or damage to pipe will occur when heavy equipment passes over the structure while placing the remainder of the backfill as embankment. Where the natural berm does not provide a minimum cover of 24 inches above the top of culverts, additional backfill shall be placed over the culverts to the minimum required depth and shall have a one on thirty slope both upstream and downstream from the culvert. The Contractor shall replace any structure damaged by his operations. All fills shall conform to lines and grades shown on the drawings. Backfill shall not be placed over any structure until the Contracting Officer has made a complete inspection.

3.3 INSTALLATION OF PIPE

3.3.1 Shaped Bedding

The structures shall be installed on firm existing ground prior to placing embankment unless otherwise permitted. After the pipe trench has been excavated to permit placement of pipe to the lines and grades shown on the drawings, the bottom shall be shaped to provide a bedding surface, firm but slightly yielding and of uniform density throughout the entire length of the trench. The bedding surface shall be shaped to fit the bottom of the pipe so that the bottom arc is subtended by a chord equal to 60% of the

diameter of the pipe. If necessary, adjustment in grade will be made during installation as directed by the Contracting Officer.

3.3.1.1 Sand Bedding

Material for compacted pervious fill shall be clean, free draining sand or gravelly sand. Particles shall be free from any objectionable coating. A washed gradation shall be within the following limits.

Sieve Size	Percent Passing by Weight
3/4"	90-100
No. 4	75-95
No. 16	25-70
No. 200	0-5

3.3.1.2 Placement and Compaction

Sand bedding shall be placed around pipe conduits at the locations and to the dimensions shown on the drawings. Placement of bedding shall be in lift thicknesses of 4 inches and will be placed simultaneously on both sides. Compaction shall be by two complete passes of an approved plate type vibrator on material essentially air dry at time of compaction. Care will be taken to prevent excessive mixing of bedding material and other backfill materials which would reduce the annular thickness shown on the drawings. The sand bedding shall be extended to include a landside outlet to ground surface at surface inlets and manholes.

3.3.2 Placing of Precast Concrete Pipe

Pipe and accessories shall be handled in such manner as to insure delivery to the trench in sound, undamaged condition. Rubber gaskets that are not to be installed immediately shall be stored in a cool dark place and out of the direct rays of the sun. Pipe and accessories shall be carefully lowered into the trench by means of a derrick, ropes, belt slings, or other suitable equipment. Under no circumstances shall any of the piping materials be dropped or dumped into the trench. Pipe shall be laid to the lines and grades indicated on the drawings. Maximum allowable deflection from a straight line or grade will be 5 degrees unless otherwise recommended by the manufacturer. Except as authorized by the Contracting Officer, pipe shall be laid with the spigot pointing in the direction of flow. The full length of each pipe shall rest solidly upon the pipe bed, with recesses excavated to accommodate bells and joints. Pipe that has the grade or joint disturbed after laying shall be taken up and relaid. Pipe shall not be laid in water or when trench conditions are unsuitable for the work. Before laying pipe, the outside surface of the spigot and the inside surface of the bell shall be cleaned and an acceptable vegetable-compound lubricant applied to the inside surface of the bell and to the rubber gasket. After the pipe has been forced together, the position of the gasket shall be checked with a feeler gage.

3.3.3 Cradle Foundation

The foundation surface shall provide a firm foundation of uniform density

throughout the entire length of the cradle. The cradle shall be carefully formed in a soil foundation that has been accurately shaped to conform to the dimensions shown on the drawings. Any overexcavation shall be filled with concrete at no additional cost to the Government.

3.3.4 Gaskets and Jointing Materials

Gaskets and Jointing Materials shall be installed in accordance with the recommendation of the particular manufacturer in regard to the use of lubricants, cements, adhesives, and other special installation requirements. Surfaces to receive lubricants, cements, or adhesives shall be clean and dry. Gaskets and jointing materials shall be affixed to the pipe not more than 24 hours prior to the installation of the pipe, and shall be protected from the sun, blowing dust, and other deleterious agents at all times. Gaskets and jointing materials shall be inspected before installation of the pipe, and any loose or improperly affixed gaskets and jointing materials shall be removed and replaced. The pipe shall be aligned with the previously installed pipe and the joint pulled together. If, while making the joint, the gasket or jointing material becomes loose and can be seen through the exterior joint recess when the joint is pulled up to within 1 inch of closure, the pipe shall be removed and the joint remade. After the pipe has been installed and before the concrete cradle or any backfill had been placed, the exposed outside pipe joint shall be filled with grout. The interior joint shall be filled with cement-mortar after pipe installations if required. The interior joint shall ideally show a 1/4-inch gap, and in no case shall the gap be over 1/2-inch.

3.4 AUTOMATIC, EXTERNAL TYPE FLAP GATES AND FRAMES

3.4.1 General

An automatic flap size of the shown on the drawings shall be placed accurately to the lines and grades required. The Contractor design and installation of the gate shall be such that the flap cannot be opened to the extent that it will not close by its own weight and such that the flap cannot become lodged in the opening of the frame. All contact surfaces between the flap and frame shall be such as to seat tightly and insure close fit with a minimum of leakage. The gate shall be designed to adequately withstand a seating head of 20 feet. Flap gates mounted on concrete may have spigot-back or flat-back type frames. Frames shall be connected to the anchor bolts as shown on the drawings. Anchor bolts shall be accurately and securely set true to alignment and plumb prior to placing the concrete. Contractor has option to use expansion anchors in lieu of the anchor bolts. Gates shall be round type. Regardless of camber, flap gates shall hang to close at times, either through an adjustment of the hanger fastening at the top connection with the gate frame, or the stub end shall be set at zero or flat grade. Round flap gates may be cast iron or structural steel at the Contractor's option.

3.4.2 Cast-Iron Flap Gates

The flap gate leaf and frame shall be cast iron with ribbed reinforcing as necessary. Hinge link bars shall be structural steel. Cast-iron flap gates shall be painted after fabrication and before assembly as specified

herein.

3.4.3 Structural Steel Flap-Gates

The flap gate leaf shall be plate steel reinforced as necessary with structural steel shapes of either angle or channel. Frames embedded in concrete may be cast iron or structural steel. Structural steel gates and frames shall be painted after fabrication and before assembly as specified herein. Structural steel flap gates shall be set to tolerance by a factory representative. Bending of the hinge assembly will not be permitted.

3.4.4 Connecting Bolts, Anchor Bolts and Hinge Pins

All Connecting Bolts, Anchor Bolts and Hinge Pins shall be stainless steel.

3.4.5 Side-hinged Gates

Side-hinged Gates will not be permitted.

3.4.6 Angle-hinged and Top-hinged Round Flap Gates

Angle-hinged and Top-hinged Round Flap Gates are permissible.

3.4.7 Tolerances

The gate shall be so constructed that when in a seated position without pressure the seating tolerance between the frame and the gate leaf shall not exceed 0.05 inch.

3.5 REINFORCED CONCRETE STRUCTURES

Concrete structures shall be constructed to the lines, grades and dimensions as shown on the drawings. Concrete and steel reinforcement shall be provided and placed in accordance with the applicable provisions of SECTIONS: 03300, 03100 and 03200. The structures shall be placed upon a firm foundation of uniform density. Soft spots shall be excavated to the limits designated by the Contracting Officer, and backfilled in accordance with paragraph: EXCAVATION AND BACKFILL OF STRUCTURES. If the Contractor overexcavates the structuresite, he may have the option of backfilling to the lines and grades shown on the drawings in accordance with paragraph: EXCAVATION AND BACKFILL OF STRUCTURES, or by placing concrete.

3.6 PAINTING

3.6.1 Flap Gates

All cast-iron or steel gates and frames shall be painted three coats of coal-tar (black) paint in accordance with SSPC Paint 16 as specified herein. A special primer shall be applied as an additional coat under the coat-tar base paint if/as recommended by the paint manufacturer. The paint shall be heavily applied by brush or spray at a cover rate of approximately 80 square feet per gallon to give a total dry film thickness of at least 20 mils for the completed system. The paint shall not be thinned unless recommended by the paint manufacturer. If brushed, the strokes shall be at

right angles to those of the preceding coat. Application and drying time between coats shall be as recommended by the paint manufacturer. Paint shall be shop applied by the manufacturer of the gates. Following installation, all surfaces specified to have received coal-tar paint coverage, which have been damaged shall be given three coats of paint as specified for original painting.

3.6.2 Preparation of Surfaces

Regardless of the paint system used, surfaces to be painted shall be clean and in accordance with SSPC SP 1 and dry before applying paint. Grease, dirt and other soiling substances shall be removed from surfaces to be painted by means of emulsions, steam solvents or others approved means. Rust and loose mill scale shall be removed by high speed power brushing, scraping, chipping, disc-sanding or other approved means. Welds and adjacent surfaces to the extent affected by welding shall be given special treatment by scraping, chipping and wire brushing to insure that flux, slag, and weld spatter are removed. Following mechanical cleaning, the weld and adjacent surfaces shall be treated in accordance with SSPC Paint 27.

The diluted material shall be applied by brush or sponge and allowed to remain one-half minute or longer, followed by thorough wiping with clean wet rags.

3.6.3 Touch-up Painting

Following installation, all surfaces which have been damaged shall be prepared and repainted to provide a finished coating equivalent to the original coating.

3.7 TESTING

3.7.1 Hydrostatic Tests for Concrete Pipe Under Levees

3.7.1.1 Shop Testing Concrete Pipe

The full length of concrete pipe and joints under levees shall be tested for leakage as follows: A hydrostatic test shall be made on the watertight joint types proposed. Only one sample joint of each type needs shop testing; however, if the sample joint fails because of faulty workmanship, an additional sample joint may be tested. During the test period the joint shall be protected from high temperatures that might soften or adversely affect the jointing materials. The possibility that some water may be absorbed by concrete pipes during this test will be considered before rejecting any rubber seals proposed. Performance requirements for joints in reinforced concrete pipe shall conform to ASTM C 361, except that tests shall be performed at an internal hydrostatic pressure of 10 psi minimum for a 20-minute period.

3.7.1.2 Field Joint Tests

Hydrostatic pressure tests on all concrete pipe joints under levees shall be made by the Contractor after the pipe has been installed but prior to placing any backfill except that required for bedding the pipe. Testing of joints shall be made by use of a water filled pipe test or a

Contractor-furnished Joint Tester approved by the Contracting Officer. Water filled pipe test method shall not be used for pipe diameters greater than 24 inches. Joints shall be required to withstand an internal hydrostatic pressure of 10 psi minimum without visible leakage for 20 minutes. After backfilling the pipe, the Contracting Officer may require additional hydrostatic tests of any joints which by inspection do not appear to be watertight.

a. Water Filled Pipe Test

Filling shall be accomplished so that all air is expelled from the pipe during the test. The Pipe shall be maintained at this pressure for a period of not less than 20 minutes, or such additional time as may be required for a complete inspection. The possibility that some water may be absorbed by the concrete pipes during this test will be taken into consideration before rejection of any rubber seals proposed. Water shall be added as necessary to maintain the pipe completely full under the specified head. The Contractor shall develop a procedure and be responsible for holding the pipe securely together during the test. The procedure shall be submitted to the Contracting Officer for approval.

b. Joint Tester

Furnish joint testing unit capable of testing up to 72-inch diameter pipe joints to 10 psi. The unit shall be a large Diameter Joint Tester acceptable to the Contracting Officer. The unit shall consist of a control panel and necessary pump, gages, valves, and hoses. Use water as a testing fluid. The Contractor shall have the gages calibrated, at no cost to the Government, by an independent testing laboratory approved by Contracting Officer. The results shall be submitted to Contracting Officer for approval prior to commencing tests. Test at the 10 psi for 20 minute duration. The allowable pressure drop shall be determined by averaging the results of three 20-minute tests conducted at the required 10 psi on a straight, nonjointed section of pipe. Obtain approval from Contracting Officer of allowable pressure drop calculation. Records of joint testing shall be furnished to the Contracting Officer. Mark any joint which does not maintain the required pressure for the 20 minute duration. Required joint pressure equals Test pressure minus allowable Pressure Drop. Joints that fail to maintain pressure shall be disassembled and all inferior elements replaced. Joint shall be retested and corrections made as necessary to meet the above pressure test. All work shall be approved by the Contracting Officer.

3.7.1.3 Defects or Visible Leakage from Joints or Pipe

The subgrade shall be inspected at the end of joint testing to determine if the portion of the joints in contact with the ground has leaked. Defects or visible leakage from joints or pipe shall be corrected. Defective pipe or joints disclosed in the hydrostatic test shall be replaced and the test repeated until the results are satisfactory to the Contracting Officer.

3.7.2 Tests for Acceptance of Materials

Tests for acceptance of materials shall be made by the Contractor in

accordance with the Contract Clause titled: Inspection of Construction.
In lieu of actual acceptance tests on materials, the Contractor may be
required to furnish (3) certified copies of certificates of compliance with
the specifications.

-- End of Section --

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LEVEE EMBANKMENT AND EARTHWORK
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PART 1 GENERAL

1.1 REFERENCES

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

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 2487	(1998) Classification of Soils for Engineering Purposes (Unified Soil Classification System)
ASTM D 698	(1991; R 1998) Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/cu. ft. (600 kN-m/cu. m.))
ASTM D 4643	(1993) Determination of Water (Moisture) Content of Soil by the Microwave Oven Method

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(1996) U.S. Army Corps of Engineers Safety and Health Requirements Manual
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1.2 DEFINITIONS

1.2.1 Satisfactory Embankment and Fill Material

Satisfactory levee embankment and fill material shall consist of cohesive materials excavated from the designated borrow area and is called cohesive material on the drawings. The designated borrow area contains a mix of soil material, which is predominantly cohesive, however, part of the designated area contains cohesionless material. The Contractor has the option to utilize satisfactory borrow material from his own borrow source at the expense of the Contractor. Satisfactory underwater fill and geotextile cushion layer material shall consist of cohesionless materials excavated from the designated borrow area and is called cohesionless material on the drawings. All levee embankment and fill material shall be

cohesive material free from roots and other organic matter; contamination from hazardous, toxic or radiological substances; trash, debris, concrete or rock larger than 3" in diameter, and frozen material. Rock smaller than 3 inches in diameter may be utilized provided that it is uniformly incorporated and distributed in the fill, comprises no more than 15 percent of a given lift, and can be suitably compacted on all sides with impervious materials. All cohesionless underwater fill and cushion layer material shall be free from roots and other organic matter; contamination from hazardous, toxic or radiological substances; trash, debris, concrete larger than 3" in diameter, and frozen material. No unsatisfactory material, encountered while excavating the borrow area, shall be utilized in the levee embankment, fill areas, cushion layer fill, or as underwater fill. All unsatisfactory material shall be stockpiled in areas adjacent to the borrow area in areas designated by the Contracting Officer.

1.2.2 Unsatisfactory Materials

Unsatisfactory materials shall not be used in any levee embankment or other required fill. Unsatisfactory materials includes all other materials that are not defined above as satisfactory materials.

1.2.3 Embankment

The terms "levee" or "embankment" as used in these specifications are defined as the earth fill portions of the levee structure or other fills related to the levee structure, including and includes all types of earth fill for the levee , and all other fills within the limits of the levee, excepting those stone and filter materials used for slope protection, which are described in Section 02245 titled: STONE (RIPRAP) PROTECTION and Section 02378A titled: GEOTEXTILES USED AS FILTERS.

1.2.4 Backfill

Backfill as used in this section is defined as that fill material which cannot be placed around or adjacent to a structure until the structure is completed or until a specified time interval has elapsed after completion.

1.2.5 Excavation

Excavation shall consist of removal of material to the lines and grades shown on the drawings, or as otherwise directed or approved by the Contracting Officer and as described in paragraph 3.4 EXCAVATION in PART 3 EXECUTION.

1.2.6 Classification of Soils

The Contractor shall classify soils utilized from the borrow area at the start of excavation and thereafter at a frequency of 7,500 CY of excavation. If the Contractor elects to utilize a borrow source other than the designated borrow source, materials used to construct the embankments and for backfills shall be classified in accordance with ASTM D 2487 (Unified Soil Classification System).

1.2.6.1 Cohesionless and Cohesive Materials

The location of cohesive and cohesionless materials excavated from the designated borrow source shall be identified on the drawings. If the Contractor elects to utilize cohesive and cohesionless materials from a different borrow source, the cohesive material shall include materials classified in ASTM D 2487 as GW, GP, SW, and SP and cohesive materials include materials classified as GC, SC, ML, CL, MH, and CH.

1.2.7 Degree of Compaction

1.2.7.1 Cohesive Material

A specific compaction density is not required for levee embankment and miscellaneous fill, however, the Contractor shall be required to compact all levee embankment and miscellaneous fill with 4 passes of a tamping roller in accordance with the compaction procedures specified in paragraph 3.14 Compaction.

1.2.7.2 Cohesionless Material

A specific compaction density is not required for the geotextile cushion layer and for the underwater fill material.

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 shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

Excavation; G-AO

Submit a written excavation plan 30 days prior to the beginning of any excavation. Approval of the detailed plan shall be obtained from the Contracting Officer prior to starting the work. If necessary, the plan shall be modified as required to meet field conditions, and the modifications shall be approved prior to use. As a minimum, the plan shall contain, the following:

- a. Proposed methods for preventing interference with, or damage to, existing underground or overhead utility lines, trees designated to remain and other man-made facilities or natural features designated to remain within or adjacent to the construction rights-of-way.
- b. Provision for coordinating the work with other Contractors working in the construction rights-of-way or on facilities crossing or adjacent to this work.
- c. The proposed methods for controlling surface and ground water in the borrow areas and required excavations.

d. Stockpiling plan for embankment material before it is transported to the project site showing locations, stockpile heights, slopes, limits, and drainage around the stockpile areas.

e. A complete listing of equipment used for excavation and to transport the excavated material.

f. The Contractor shall provide a temporary water crossing and access road from the designated borrow areas to the required fill and levee embankment locations. Prior to excavation, the Contractor shall clear and grub the designated borrow area. The Contractor shall excavate the borrow areas for use for all levee embankment and miscellaneous fill material, the geotextile cushion layer, and underwater fill material as required for use in the levee embankment, miscellaneous, geotextile cushion layer, and underwater fill areas. Upon completion of borrow material excavation, the Contractor shall level out and grade the borrow area to provide positive drainage. The Contractor is required to provide a proposed sequence of work for clearing and grubbing of the designated borrow area, excavating the designated borrow area material and hauling and placing of the borrow material for the levee embankment, excavating and hauling of channel bank and existing levee material, excavation and backfill for the L-wall structure and for drainage pipe, miscellaneous fill, cushion layer material, and underwater fill on the project site, final grading of the borrow area, including erosion protection. The Contractor shall provide and submit an Erosion, Runoff, and Sediment Protection Plan to control erosion, sediment, and runoff in accordance with specification Section 01355 titled: ENVIRONMENTAL PROTECTION and specification section 01562 titled: (Nebraska) NPDES PERMIT REQUIREMENTS FOR STORM WATER DISCHARGES FROM CONSTRUCTION SITES throughout the duration of the project. The Contractor is responsible for all survey work required for the project, including an initial and final topographic survey of the levee embankment and miscellaneous fill areas to establish compacted and uncompact fill quantities.

h. The Contractor's proposed road pattern, and plan for implementing dust control measures.

Borrow Areas; G-AO

Submit a written statement to the Government not later than 30 days after receipt of Notice to Proceed indicating the Contractor's intention to use the designated borrow area or to utilize an alternate borrow source.

Plan of Operations; G-AO

Thirty (30) days prior to commencement of haul road construction or placing embankment and backfill which ever is earlier, the

contractor shall submit for approval a Plan of Operations for accomplishing all embankment and backfill construction and for the location and construction of haul roads. This plan shall include but not be limited to the Contractor's proposed sequence of construction for embankment and backfill items, and methods and types of equipment to be utilized for all embankment and backfill operations, including transporting, placing, and compaction. This plan shall also include the names and addresses of the commercial testing labs, which will perform any necessary riprap or bedding testing and inspection and describe how all required testing will be performed.

SD-06 Test Reports

Measurement of levee embankment fill material; G-AO

Submit a copy of the records of each compliance survey the next work day following the survey.

1.4 SYSTEM DESCRIPTION

The work covered by this section consists of furnishing all equipment, labor, materials, and incidentals, and performing all operations necessary for development and excavation of levee embankment, miscellaneous fill, and cushion layer material from the designated borrow area and for all other excavations incidental to the construction of the levee embankment as specified and shown; foundation preparation and the construction of levee embankments, channel and embankment excavation and grading for underwater fill, bedding, and rip rap, excavation of designated existing riprap, hauling, and placement of existing riprap in designated areas shown on the drawings, excavation, hauling, placement and compaction of the existing levee where shown on the drawings, miscellaneous fill material, excavation and backfill adjacent to the L-wall and drainage structures, excavation and grading along and adjacent to the levee alignment, lake mitigation excavation and disposal of 5,400 CY of material, topsoil at designated areas, tilling and surface preparation for seeded areas, road crossings, and other incidental earthwork as may be necessary to complete the levee as specified herein and as shown on the drawings. All work under this section shall comply with the requirements of EM 385-1-1 and with the safety requirements of Western Sand and Gravel Company, while on their property.

1.5 GENERAL CONDITIONS

1.5.1 Lines and Grades

The levee embankment, including ramps, turnouts, road crossings, channel slope excavation and grading, and all miscellaneous fill material shall be constructed to the lines, grades, and cross sections indicated on the drawings, unless otherwise directed by the Contracting Officer. The Government reserves the right to increase or decrease the foundation widths, and embankment slopes or to make such other changes in the embankment or backfill sections as may be deemed necessary to produce a safe structure. Changes in quantities resulting from such revisions will not constitute

justification for change in contract unit prices, except as provided for in the Variations in Estimated Quantities Clause. Increases in height of section, made to compensate for settlement or consolidation of the embankment material subsequent to the completion of the embankment, will not exceed 2 percent of the height above the foundation at the levee centerline indicated. The end slopes and side slopes of partial fill sections shall not be steeper than one vertical on 3 horizontal, unless otherwise shown on the drawings.

1.5.2 Conduct of the Work

The Contractor shall maintain and protect the levee embankment, riprap slope areas, and fill areas in a satisfactory condition at all times until final completion and acceptance of all work under the Contract. If, in the opinion of the Contracting Officer, the hauling equipment causes horizontal shear planes or slicken sides, rutting, quaking, heaving, cracking, or excessive deformation of the levee embankment, backfill, and channel slopes, the Contractor shall limit the type, load, or travel speed of the hauling equipment on the levee embankment, backfill, and channel slopes. The Contractor may be required to remove, at his own expense, any embankment or fill material placed outside of prescribed slopelines. Any approved embankment or backfill material which is lost in transit or rendered unsuitable after being placed in the levee embankment, backfill, geotextile cushion layer, and channel slopes and before final acceptance of the work shall be replaced by the Contractor in a satisfactory manner and no additional payment will be made therefore. The Contractor shall excavate and remove from the levee embankment, backfill, and channel slopes any material which is unsatisfactory and shall also dispose of such material and refill the excavated area as directed, all at no cost to the Government.

1.5.3 Materials

Materials for levee embankment, turn outs, ramps and other miscellaneous fill material shall be obtained from the designated borrow areas designated on the drawings. The Contractor shall pay Western Sand and Gravel Company (WSGC) the sum of 50 cents per cubic yard of compacted embankment, compacted miscellaneous fill, cushion layer material, and underwater fill material excavated from the designated borrow area and placed in the levee embankment, including levee turnouts, levee ramps, road crossings, and all miscellaneous fill and for underwater and cushion layer fill where designated on the drawings. The address for WSGC is:

Western Sand and Gravel Company
P.O. Box 28
Ashland, Nebraska 68003
Attn: Dean Busing

Phone Number 402-944-3331

Material needed to grade the channel side slopes in preparation for bedding and riprap, the cushion layer, and underwater fill placement shall be obtained from material obtained from channel slope excavation and grading or from the designated borrow area. Fill material for miscellaneous fill areas shall be taken from the channel slope excavation at the new riprap

area and from the designated borrow area. In lieu of the designated borrow area, the Contractor has the option to utilize satisfactory borrow material from his own borrow source at his expense. Materials obtained from required excavation which meet or which can be processed to meet the requirements for each miscellaneous fill material, or any other material required for this project, as specified herein, may be utilized as miscellaneous backfill. The Contractor shall only utilize satisfactory fill material specified in paragraph 1.2.1 Satisfactory Embankment and Fill Material. If the Contractor elects to utilize a borrow source other than the designated borrow source, the Contractor shall submit to the Contracting Officer the source or sources from which he intends to obtain materials for embankment construction, miscellaneous fill, geotextile cushion layer, and for underwater fill. If a source is selected other than a commercial quarry or other commercial entity from which earth or rock material will be directly purchased and where the Contractor or his subcontractor will perform the borrow excavation, a written statement will be provided to the Contracting Officer indicating permission to utilize the area. It shall be the responsibility of the Contractor to obtain Federal, State, and local permits which may be required for excavation and reclamation of all borrow areas.

1.5.4 Haul Roads

Haul roads shall be located and constructed as approved by the Contracting Officer within the project boundaries. The Contractor will not be allowed to utilize WSGC roads as haul roads without written permission from WSGC. Prior to the commencement of construction the contractor shall submit for approval a site plan detailing the location of all haul roads within the project limits. Haul roads between the off-site borrow area and the levee embankment shall be located within the limits approved by the Contracting Officer. The limits of the borrow haul road shall be clearly marked in the field using construction fencing or similar methods approved by the Contracting Officer. Areas on each side of the borrow haul road corridor shall not be disturbed. The Contractor shall adhere to the bald eagle dormant period requirements outlined in specification section 01355 Environmental Protection and 0800 Special Contract Requirements. Haul roads shall be constructed to maintain the intended traffic, be free draining, and be maintained in good condition throughout the contract period. Any haul road which crosses any creek or drainage channel shall be constructed, and maintained by the Contractor so as to not flood either upstream areas by restricting stream flows or flood downstream areas by the release of any stored water in the event that the crossing fails for any cause. Haul roads, including the haul road constructed through the sand pit lake, constructed during the contract duration shall be removed after work is completed and the impacted area restored to its preconstruction conditions. The Contractor shall plow and/or scarify or otherwise loosen all access and haul roads other than existing roads to a minimum of 6 inches deep and the surface shall be left in a smooth condition. All haul roads within the right-of-way that will remain as public thoroughfares after construction shall be cleaned daily and maintained in the preconstruction condition. All costs associated with these haul roads shall be considered as a subsidiary obligation of the Contractor.

1.5.5 Ramps, Road Crossings, Turnouts, and Levee Crossings

Ramps, road crossings, turnouts and levee crossings shall be constructed at the locations shown on the drawings by placement of satisfactory fill as specified in paragraph 1.2.2. Ramps, road crossings, turnouts, and crossings shall be constructed only by adding material to the levee crown and slopes. Ramps, road crossings, turnouts shall be constructed as detailed on the drawings.

1.5.6 Stockpiling

Any on-site stockpiling of embankment materials shall be in accordance with paragraph titled: Stockpiles. No payment will be made for such stockpiling nor for the reloading and hauling of these materials to their final position.

1.5.7 Slides and Foundation Failures

When sliding occurs in any part of the embankment, backfills, and channel slope areas prescribed in this section after they have been placed, but prior to final acceptance of all work under the contract, the Contractor shall repair the slide as directed by the Contracting Officer. When the slide is caused through the fault of the Contractor, the repair shall be made at no cost to the Government. When the slide is not the fault of the Contractor, an equitable adjustment in the contract price shall be made pursuant to the Contract Clause CHANGES to cover the cost of the repairs.

1.5.8 Protection of Existing Man-Made Facilities and Natural Features

Embankment construction shall be conducted in such a manner as to avoid damage to trees left standing and trees outside the embankment areas, existing buildings, man-made facilities and natural features, with due regard to the safety of employees and others, and in compliance with EM 385-1-1.

1.5.9 Drainage

The Contractor shall not block or restrict the flow in a natural drain, existing culvert, ditch or channel at any time without obtaining prior written approval from the Contracting Officer. This approval shall not relieve the Contractor from responsibility for any damage caused by his operation. The Contractor shall monitor the river flow and provide sufficient free discharge areas so that conditions are not worsened upstream or downstream by possible floods during construction. Surface water shall be directed away from excavations and construction sites so as to prevent erosion and undermining of foundations. Diversion ditches, dikes, and grading shall be provided and maintained as necessary during construction. Excavated slopes and backfill surfaces shall be protected to prevent erosion and sloughing. Excavation shall be performed so that the site and the area immediately surrounding the site and affecting operations at the site shall be continually and effectively drained.

1.6 PROJECT SITE CONDITIONS

1.6.1 Protection of Cultural and Natural Resources and NPDES Permit

Requirements

All work and Contractor operations shall comply with the requirements of Section 01355 ENVIRONMENTAL PROTECTION and with the requirements of this section. All work and Contractor operations shall comply with the requirements of Section 01562 (NEBRASKA) NPDES PERMIT REQUIREMENTS FOR STORM WATER DISCHARGES FROM CONSTRUCTION SITES.

1.6.2 Historical, Archeological, and Cultural Resources

Historical, archeological, and cultural resources within the Contractor's work limits may exist. If, during construction activities, the Contractor observes items that may have historical or archeological value, such observations shall be reported immediately to the Contracting Officer so that 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. The Contractor shall cease all activities that may result in the destruction of these resources and shall prevent his employees from trespassing on or otherwise damaging such resources.

1.6.3 Subsurface Data

Subsurface data of the borrow area and the project site is not available.

PART 2 PRODUCTS

2.1 HAUL ROAD MATERIALS

The Contractor is responsible for the construction, maintenance and removal of all haul roads, including the haul road through the sand pit lake, utilized by the Contractor for all construction activities.

2.2 TYPES OF FILL MATERIALS

2.2.1 Embankment Fill

Levee embankment, levee ramp, levee crossing, and levee turnout and fill material adjacent to the levee shall be obtained from the designated borrow area provided by the Government. The levee embankment, levee ramp, crossing and turnout fill material shall consist of satisfactory cohesive materials as defined in paragraph 1.2.1.

2.2.2 Cohesive Fill

If the Contractor elects to utilize a borrow source other than the designated borrow source, this material shall consist of satisfactory impervious material classified as lean clay (CL), fat clay (CH), low plasticity silt (ML), high plasticity silt (MH), sand containing more than 30 percent of clay (CL), and borderline clay and silt (CL-ML) in accordance with ASTM D 2487.

2.2.3 Cohesionless Fill

If the Contractor elects to utilize a borrow source other than the

designated borrow source, this material shall consist of satisfactory pervious material classified as well graded sand (SW) and poorly graded sand (SP) in accordance with ASTM D 2487.

2.2.4 Random Fill

Random fill may consist of select fill, impervious fill, and pervious fill, or a combination of them.

2.2.5 Topsoil

Topsoil will be required on the levee embankment and on all areas disturbed by construction as specified in section 02921 titled: SEEDING. The Contractor shall uniformly spread at least 6 inches of soil satisfactory cohesive material excavated from the designated borrow area as described in paragraph 1.2.1 or is determined to meet the topsoil requirements of section 02921 titled: SEEDING. All seeded areas shall be tilled and amended as required by specification section 02921 SEEDING prior to seeding.

PART 3 EXECUTION

3.1 PREPARATION OF GROUND SURFACE FOR FILL

All vegetation, such as roots, brush, heavy sods, heavy growth of grass, and all decayed vegetable matter, rubbish, miscellaneous debris, concrete, pipe, rock, rebar and other unsuitable material within the area upon which fill is to be placed, shall be stripped or otherwise removed before the fill is started and the material shall be disposed off site at the Contractor's expense. In no case will unsuitable material remain in or under the fill area. Stumps, logs and roots more than 1-1/2 inch in diameter shall be excavated and removed to a depth not less than 18 inches below the original ground surface. Sloped ground surfaces steeper than one vertical to four horizontal on which fill is to be placed shall be plowed, stepped, or broken up, as directed, in such manner that the fill material will bond with the existing surface.

3.2 SHORING, SHEETING, AND BRACING

Shoring, sheeting, and bracing shall be installed where required for the protection of existing natural features and man-made facilities, for the safety of workers and the public, in compliance with EM 385-1-1, and to insure the integrity of the embankment. Shoring, sheeting and bracing shall not be used in lieu of the required excavation slopes. Shoring, sheeting, and bracing shall be adequately designed and properly installed to withstand anticipated loads. Shoring, sheeting and bracing shall be planned and designed by a registered professional engineer. The Contractor shall submit a plan for shoring, sheeting, and bracing in accordance with paragraph SUBMITTALS. All shoring, sheeting and bracing shall be removed as embankment and backfill operations progress.

3.3 DEWATERING AND DIVERSION

Surface and groundwater control shall be accomplished in coordination with the required excavation and embankment construction. Surface and/or groundwater control may necessitate the use of temporary diversion ditches, cofferdams and/or dewatering by the use of pumping. Methods for care of surface water and for controlling the surface and groundwater levels shall be subject to approval of the Contracting Officer.

3.4 EXCAVATION

Excavation shall consist of removal of material in preparing the foundations to the lines and grades shown on the drawings, removal of material from ditches, channel side slope excavation, excavation at riprap areas, 5,400 CY of lake mitigation excavation and material placement or disposal, borrow material excavation to the lines and grades shown on the drawings, removal of objectionable materials and obtaining required fill materials from the borrow areas. Blasting will not be permitted. Over excavation shall be backfilled to grade with similar over excavated material or satisfactory material and compacted to a density of at least that of the surrounding material.

3.4.1 Over Excavation

3.4.1.1 Outside Limits of Levee Foundations or Structures

Over excavation outside the limits of the foundations of levees or structures shall be backfilled to grade with similar over excavated material or satisfactory material and compacted to a density of at least that of the surrounding material.

3.4.1.2 Within Limits of Levee Foundations or Structures

Over excavation within the limits of the foundations of levees or structures shall be backfilled to grade in accordance with paragraph PREPARATION OF FOUNDATION, PARTIAL FILL SURFACES AND ABUTMENTS.

3.4.2 Ditches

Drainage ditches shall be excavated at the locations and to the lines and grades shown on the drawings and in accordance with paragraph TOLERANCES.

3.4.3 Slopes and Surcharges

Temporary excavation slopes for any channel, structure excavation, or other required excavation shall not be steeper than the specified finished slope or the specified construction slope, as applicable, and subject to the approval of the Contracting Officer. This may be accomplished by benching the temporary slope so that the average slope is not steeper than the specified slope. In addition, no temporary, permanent, or construction slope shall be surcharged with excavated or stockpiled material or with heavy construction equipment which would have the same effect as the surcharge material. The toe of stockpiled material shall be maintained a minimum distance back from the top of the finished excavation equal to the depth of the excavation. The maximum height of such stockpile without causing instability of the excavation slope shall be determined by the

Contractor. Any slide or other adverse conditions caused by failure of the Contractor to maintain these conditions shall be considered the responsibility of the Contractor and remedial measures shall be at the Contractor's expense.

3.4.4 Borrow Areas

3.5 TOLERANCES

A tolerance of 2 inches above or below the prescribed grade will be allowed in the excavation for excavations for riprap and bedding.

All levee embankments, levee ramps and crossings, and backfills, and channel slope excavation and grading for riprap shall be constructed to the grades, lines, and cross-sections shown on the drawings. At all points a tolerance of 2 inches above the prescribed grade will be permitted in the final dressing, provided that any excess material is so distributed that the crown of the levee drains and that there are no abrupt humps or depressions in any surfaces.

3.6 SLIDES

In case sliding occurs in any part of the excavations prescribed in this section after they have been excavated, but prior to final acceptance of all work under the contract, the Contractor shall repair the slide as directed by the Contracting Officer. In case the slide is caused through the fault of the Contractor, it shall be repaired at no cost to the Government. In case the slide is due to no fault of the Contractor, an equitable adjustment in the contract price will be made for the repairs in accordance with the Contract Clause CHANGES.

3.7 STOCKPILES

Provisions of paragraph SLOPES AND SURCHARGES are applicable to all stockpiled materials. Upon completion of construction operations, all remaining stockpiled material shall be removed and disposed of by the disposal methods specified in paragraph DISPOSITION OF EXCAVATED MATERIALS.

3.8 MAINTENANCE OF WORK

3.8.1 Debris Removal

The Contractor shall maintain all excavations free from leaves, brush, sticks, trash, and other debris until final acceptance of all work under the contract at no additional cost to the Government.

3.8.2 Sediment Removal

Prior to final acceptance of all work under this contract, the removal of sediments from ditches or drainage swales shall be required to restore design grade and section at no additional cost to the Government.

3.9 DISPOSITION OF EXCAVATED MATERIALS

3.9.1 Satisfactory Materials

Satisfactory excavated material shall be incorporated in the appropriate zones of the levee embankment, levee ramps, turnouts, and crossings, and channel slopes as specified in paragraph 1.2.1 titled: Satisfactory Embankment Materials. When direct placement is not practicable, satisfactory material from the excavation shall be stockpiled for subsequent use in parts of the work for which it is specified herein and/or as indicated on the drawings. Satisfactory materials in excess of the quantity necessary to construct backfills and embankments shall be disposed of as specified for unsatisfactory materials.

3.9.2 Unsatisfactory Materials

Unsatisfactory materials shall be as defined in paragraph DEFINITIONS, subparagraph 1.2.2 titled UNSATISFACTORY MATERIALS. Unsatisfactory materials from the excavations prescribed in this section shall be disposed off site at the expense of the Contractor. The material shall be shaped so that its surface is free from abrupt changes in grade and shall be sloped to drain. No additional payment will be made for placing and grading of the unsatisfactory material.

3.10 PREPARATION OF FOUNDATION, PARTIAL FILL SURFACES AND ABUTMENTS

3.10.1 Earth

After excavation as described in paragraph titled: EXCAVATION or stripping as described in section titled: CLEARING, GRUBBING AND STRIPPING of the embankment foundation to the extent indicated or otherwise required, the sides of stump holes, test pits, and other similar cavities or depressions shall be broken down so as to flatten out the slopes, and the sides of the cut or hole shall be scarified to provide bond between the foundation material and the fill. Unless otherwise directed, each depression shall be filled with satisfactory cohesive fill material. The fill shall be placed in layers, and compacted in accordance with the applicable provisions of paragraphs PLACEMENT, and COMPACTION for the specific material type. Materials which cannot be compacted by roller equipment because of inadequate clearances shall be compacted with power tampers in accordance with the paragraph COMPACTION for the specific material type. After filling of depressions and immediately prior to placement of satisfactory cohesive compacted fill in any section of the embankment, the foundation of such section shall be loosened thoroughly by scarifying, plowing, discing or harrowing to a minimum depth of 6 inches. After removal of roots or other debris turned up in the process of loosening, the entire surface of the embankment foundation area shall be compacted by 2 complete coverage of the compaction equipment as specified for the appropriate type of fill. Immediately prior to placement of compacted fill on or against the surfaces of any partial fill section, all soft or loose material, all material containing cracks or gullies, and all material that does not conform with the specified zoning of the embankment shall be removed. The remaining surface of the partial fill shall be loosened by scarifying, plowing, discing or harrowing to a minimum depth of 6 inches. The surface of the partial fill section upon which fill is to be placed shall then be compacted as hereinafter specified for the appropriate type

of fill. No separate payment will be made for loosening and rolling the foundation area, the abutment area, or the surfaces of partial fill sections, but the entire cost thereof shall be included in the applicable contract price for fill.

3.10.2 Benching

Benching into existing roads and existing berms and embankments is required in order to place and compact the material in horizontal layers. The vertical face cut into the existing roads, existing berms, and embankments resulting from the benching operation shall be a minimum of 12 inches in height but shall not exceed 24 inches in height.

3.11 TEST FILL STRIPS - Not Used

3.12 PLACEMENT AND SPREADING

3.12.1 General

Prior to beginning embankment placement on the levee foundation the Contractor shall notify the Government that the foundation is ready to receive fill. No fill shall be placed on any part of the embankment foundation until such areas have been inspected and given final approval by the Contracting Officer.

3.12.1.1 Gradation and Distribution

The gradation and distribution of materials throughout each zone of the levee shall be such that the embankment will be free from lenses, pockets, streaks, and layers of material differing substantially in texture or gradation from surrounding material of the same class. If lenses, pockets, or layers of materials differing substantially in texture or gradation from surrounding material occur in the spread material, the layer shall be mixed by harrowing or any other approved method to blend the materials. During the placing and spreading process, the Contractor shall maintain at all times a force of workers adequate to remove all roots, debris, and oversize stone from all embankment materials. All stones and rock fragments larger than 3 inches in any dimension shall be removed at the source prior to hauling to the fill. No fill shall be placed upon a frozen surface, nor shall snow, ice, or frozen earth be incorporated in the embankment.

3.12.1.2 Foundations and Partial Embankment Fills

The foundations and all partial embankment receiving fills shall be kept thoroughly drained. Placing operations will be such as to avoid mixing of materials from adjacent sections as much as practicable.

3.12.1.3 Equipment Traffic

Equipment traffic on any embankment zone shall be routed to distribute the compactive effort as much as practicable. Ruts formed in the surface of any layer of spread material will be filled before that material is compacted. If, in the opinion of the Contracting officer, the compacted surface of any layer of material is too smooth to bond properly with the

succeeding layer, the surface shall be loosened by scarifying or other approved methods before material from the succeeding layer is placed.

3.12.2 Placement on Surfaces Containing Frozen Materials

Embankment shall not be placed on a foundation which contains frozen material. This prohibition encompasses all foundation types, including the natural ground, all prepared subgrades (whether in an excavation or on an embankment, and all layers of previously placed and compacted earth fill which become the foundations for successive layers of earth fill. All material that freezes or has been subjected to freeze-thaw action during the construction work, or during periods of temporary shutdowns, such as, but not limited to nights, holidays, weekends, or winter shutdowns of earthwork operations, shall be removed to a depth that is acceptable to the Contracting Officer and replaced with new material. Alternatively, the material shall be thawed, dried, reworked and recompacted to the specified criteria before additional material is placed. The Contracting Officer will determine when placement of fill shall cease due to cold weather. The Contracting Officer may elect to use average daily air temperatures, and/or physical observation of the soils for the determination. Levee embankment material shall not contain frozen clumps of soil, snow or ice.

3.12.3 Placement of Embankment and Backfill Against the L-Wall and Closure and Drainage Structures

No embankment or backfill shall be placed on or against concrete less than 7 days after placement or 70 percent of the design strength, without prior approval of the Contracting Officer. Crawler-type tractors, vibratory equipment and other similar compaction equipment shall not be used within 4 feet of any completed or partially completed flood wall or drainage structure. Compaction within 4 feet of completed or partially completed L-Wall and drainage structures shall be accomplished by the use of mechanical hand tampers, vibrating plates, or other approved methods and equipment. The Contractor shall ensure that compaction operations do not damage any existing utilities. Any damage caused by the Contractor's operation shall be repaired at the Contractor's expense.

3.12.4 Satisfactory Cohesive Fill

The satisfactory cohesive) fill material shall be placed and spread in layers not more than 8 inches in uncompacted thickness, except that within 4 feet of flood wall and closure structures, the uncompacted layer thickness shall be reduced to 4 inches. The materials for cohesive fill shall be placed or spread in layers, the first layer not more than 8 inches in thickness and the succeeding layers not more than 8 inches in thickness prior to compaction.

3.12.5 Miscellaneous Cohesive Fill

Miscellaneous cohesive fill material shall be placed and spread in layers not 8 inches in uncompacted thickness, except that within 4 feet of any structures, the uncompacted layer thickness shall be reduced to 6 inches. The materials for miscellaneous cohesive fill shall be placed or spread in layers, the first layer not more than 8 inches in thickness and the

succeeding layers not more than 8 inches in thickness prior to compaction.

3.13 Moisture Control

Even though compaction densities are not required for cohesive fill, the Contractor shall perform soil classifications and proctors to determine the optimum moisture content necessary for compaction in accordance with paragraph 3.18 titled: Field Quality Control. Material that is not within plus or minus 3% of optimum of the moisture content limits after compaction shall be reworked to obtain the required plus or minus 3% of optimum moisture content, regardless of density.

3.13.1 Insufficient Moisture for Suitable Bond

If the top or contact surfaces of a partial fill section become too dry to permit suitable bond between these surfaces and the additional fill to be placed thereon, the Contractor shall loosen the dried materials by scarifying or discing to such depths as may be directed by the Contracting Officer, shall dampen the loosened material to an acceptable moisture content, and shall compact this layer in accordance with the applicable requirements of paragraph COMPACTION.

3.13.2 Excessive Moisture for Suitable Bond

If the top or contact surfaces of a partial fill section become too wet to permit suitable bond between these surfaces and the additional fill to be placed thereon, the wet material shall be scarified and permitted to dry, assisted by discing or harrowing, if necessary, to such depths as may be directed by the contracting officer. The material shall be dried to an acceptable moisture content, and shall be compacted in accordance with the applicable requirements of paragraph COMPACTION.

3.13.3 Drying Wet Material

Material that is too wet shall be spread on the embankment and permitted to dry, or shall be dried in the borrow area prior to bringing to the levee embankment be assisted by discing or harrowing, if necessary, until the moisture content is reduced to an acceptable amount as determined by the Contracting Officer.

3.13.4 Increasing Moisture in Dry Material

The moisture content of material that is too dry, will be adjusted on the levee embankment or will be adjusted in the borrow area prior to bringing to the levee embankment. The Contractor will add water to the fill material and by harrowing, or other approved methods, work the moisture into the material until a uniform distribution of moisture within the specified limits is obtained. Water applied on a layer of fill on the levee embankment shall be accurately controlled in amount so that free water will not appear on the surface during or subsequent to rolling. Should too much water be added to any part of the embankment, the rolling on that section of the embankment shall be delayed until the moisture content of the materials is reduced to an amount within the specified limits. If it is impracticable to obtain the specified moisture content by

wetting or drying the material on the fill, the Contractor may be required to pre-wet or dry back the material at the source of excavation or in the borrow area.

3.14 COMPACTION

3.14.1 Compaction Equipment

Compaction equipment shall conform to the following requirements and shall be used as prescribed in subsequent paragraphs.

3.14.1.1 Tamping Rollers

Tamping rollers shall be as follows:

a. Towed -Tamping rollers shall consist of a heavy duty double drum unit, with a drum diameter not less than 60 inches, and an individual drum length of not less than 60 inches. The drums shall be capable of being ballasted with water or a combination of sand and water. Each drum shall have staggered feet uniformly spaced over the cylindrical surface such as to provide approximately three tamping feet for each two square feet of drum surface. The tamping feet shall be 7 to 9 inches in clear projection from the cylindrical surface of the roller and shall have a face area of not less than 5 square inches nor more than 7 square inches. The roller shall be equipped with cleaning fingers, so designed and attached as to prevent the accumulation of material between the tamping feet, and these cleaning fingers shall be maintained at their full length throughout the periods of use of the roller. The weight of the roller shall not be less than 3500 pounds per foot of linear drum length weighted, and shall not be more than 2000 pounds per foot of drum length empty. The two drums comprising one roller unit shall be yoked such that they will oscillate when traversing uneven surfaces. The design and operation of the tamping roller shall be subject to the approval of the Contracting Officer who shall have the right at any time during the prosecution of the work to direct such repairs to the tamping feet, minor alterations in the roller and variations in the weight as may be found necessary to secure optimum compaction of the earth fill materials. The Contractor may be required to add ballast to the roller to the maximum capacity specified by the manufacturer of the roller. The roller shall be drawn by a crawler-type or a rubber-tired tractor at a speed not to exceed 3.5 miles per hour. The use of the rubber-tired tractor shall be discontinued if the tires leave ruts that prevent uniform compaction by the tamping roller. If tamping rollers are used in tandem, not more than two rollers in tandem will be permitted and in such case, one trip of the tandem rollers over any surface will be considered as two passes. When tamping rollers are used in tandem, the tamper foot spacing shall be offset so that the circumferential rows on the rear drums are in line with the mid-point of the circumferential rows on the forward drums.

b. Self-propelled - Conditioned upon satisfactory performance,

self-propelled tamping rollers may be used in lieu of tractor-drawn tamping rollers. Self-propelled rollers exceeding the empty weight requirement may be used provided that by the substitution of tamping feet, having a face area not exceeding 14 square inches, the nominal foot pressure on the tamping feet of the self-propelled roller can be adjusted to approximate the nominal foot pressure of the towed roller for the particular working condition required for the towed rollers. The tamping feet shall be 7 to 9 inches in clear projection from the cylindrical surface of the roller. For self-propelled rollers, in which steering is accomplished through use of rubber-tired wheels, the tire pressure shall not exceed 40 pounds per square inch. Self-propelled rollers shall be operated at a speed not to exceed 3.5 miles per hour.

3.14.1.2 Hand Operated Compactors

Compaction of material, in areas where it is impracticable to use a roller or tractor compaction shall be performed by the use of approved hand operated power compactors.

a. Power Tampers: Power tampers shall be hand operated equipment capable of compacting material in confined areas. The compactors shall be either an internal combustion or pneumatic activated tamper. Tampers shall have sufficient weight and striking power to produce the specified compaction. The character and efficiency of this equipment shall be subject to the approval of the Contracting Officer.

b. Vibratory Plate Compactor: Vibratory compactors operated by hand in confined areas shall utilize the oscillating cam principal and shall deliver an impact of not less than 2000 pounds at a rate of approximately 2000 impulses per minute. The character and efficiency of this equipment shall be subject to the approval of the Contracting Officer.

3.14.1.3 Crawler-type Tractors

Crawler-type tractors used for spreading or compaction shall weigh not less than 20,000 pounds, shall exert a unit tread pressure of not less than 6 pounds per square inch, and shall not be operated at a speed to exceed 3.5 miles per hour.

3.14.1.4 Miscellaneous Equipment

Scarifiers, disks, spring-tooth or spike-tooth harrows, spreaders, and other equipment shall be suitable for use in embankment construction and approved by the Contracting Officer. Equipment used for blending fill material shall be capable of penetrating the full loose lift thickness of the specific material type.

3.14.2 Compaction of Cohesive Fill

After a layer of material has been dumped and spread, it shall be harrowed to break up and blend the fill materials and to obtain uniform moisture distribution. Harrowing shall be performed with a heavy disk plow, or

other approved harrow, to the full depth of the layer. If one pass of the harrow does not accomplish the breaking up and blending of the materials, additional passes of the harrow shall be required, but in no case will more than three passes of the harrow on any one layer be required for this purpose. The lift shall be compacted with not less than four (4) complete coverages of an approved 50-ton tamping roller traversing in a direction parallel to the axis of the levee. In areas which are not accessible by roller, the fill shall be placed in layers not more than 4 inches in uncompacted depth and compacted with an approved hand operated compactor to a density equal to that obtained in other areas which are accessible to rollers. Dumping, spreading, sprinkling, and compacting may be performed at the same time at different points along a section when there is sufficient area to permit these operations to proceed simultaneously. Compaction equipment shall be operated such that the strip being traversed by the roller shall overlap the rolled adjacent strip by not less than 3 feet.

3.14.3 Compaction Adjacent to Structures and Utilities

Heavy equipment for spreading and compacting fill shall not be operated within 4 feet of structures, drainage structures, or utilities, except as otherwise specified herein. Material within 4 feet shall be compacted using appropriate hand operated compactors specified herein.

3.14.4 Placing Topsoil

The levee surface and all areas disturbed by construction will require a 6" layer of topsoil as specified in Section 02921 titled: SEEDING.

3.14.4.1 Clearing

Prior to placing topsoil, vegetation shall be removed from the area and the ground surface cleared of all other materials that would hinder proper grading, tillage or subsequent maintenance operations.

3.14.4.2 Grading

Previously constructed grades shall be repaired if necessary so that the areas to be seeded shall conform to the section indicated on the drawings.

3.14.4.3 Tillage

Subsequent to the above grading, the areas to be seeded shall be thoroughly scarified by approved means to a depth of at least 6 inches. The work shall be performed only during periods when beneficial results are likely to be obtained. When conditions are such, by reason of drought, excessive moisture, or other factors, that satisfactory results are not likely to be obtained, the work will be stopped by the Contracting Officer and shall be resumed only when directed. Undulations or irregularities in the surface that would interfere with further construction operations or maintenance shall be leveled before the next specified operation.

3.14.4.4 Placing Topsoil

In areas requiring topsoil, soil material shall be uniformly distributed on

the areas designated on the drawings and evenly spread to a minimum thickness of 4 inches. Spreading shall be performed in such manner that planting can proceed with little additional soil preparation or tillage. The resulting surface shall meet the finish surface requirements specified in the following paragraph: FINISHED EXCAVATION, FILLS AND EMBANKMENTS. Topsoil shall not be placed when the subgrade is frozen, excessively wet, extremely dry, or in a condition otherwise detrimental to proper grading or the proposed planting.

3.14.4.5 Finished Excavation, Fills, and Embankments

All areas covered by the project, including excavated and filled sections and adjacent transition areas, shall be uniformly smooth graded. The finished surface shall be reasonably smooth, compacted, and free from irregular surface changes. The degree of finish shall be that ordinarily obtainable from either blade-grader or scraper operations, except as otherwise specified. The finished surface shall be not more than 0.15 foot above or below the established grade or approved cross section and shall be free of depressed areas where water would pond.

3.14.4.6 Protection of Existing Service Lines and Utilities Structures

Existing utility lines that are shown on the drawings, or the locations of which are made known to the Contractor prior to excavation that are to be retained, as well as utility lines constructed during excavation operations, shall be protected from damage during excavation and backfilling, and if damaged, shall be repaired by the Contractor at his expense. In the event that the Contractor damages any existing utility lines that are not shown, or the locations of which are not made known to the Contractor, report thereof shall be made immediately to the Contracting Officer. If determined that repairs are to be made by the Contractor, such repairs will be made in accordance with the clause Entitled "Changes" of the CONTRACT CLAUSES.

3.14.4.7 Adjustment of Existing Structures.

All manholes, valve boxes, or inlets of any nature within the project that do not conform to the new finish grade in either surfaced or unsurfaced areas shall be adjusted to the new finish grade. The structure shall be adjusted as needed to fit the new conditions. All structures shall be of a type suitable for the intended use and shall conform to the requirements of the applicable section of these specifications.

3.14.5 Protection

During construction, embankments and excavations shall be kept shaped and drained. Ditches and drains along the subgrade shall be maintained in such manner as to drain effectively at all times. Where ruts occur in the subgrade, the subgrade shall be brought to grade, reshaped if required, and recompacted prior to the placing of surfacing. The storage or stockpiling of materials on the subgrade will not be permitted. No levee surfacing

shall be laid until the subgrade has been checked and approved, and in no case shall any levee surfacing be placed on a muddy subgrade or on one containing frost. Newly graded areas shall be protected from traffic and from erosion, and any settlement or washing away that may occur from any cause, prior to acceptance, shall be repaired and grades reestablished to the required elevations and slopes. All work shall be conducted in accordance with the environmental protection requirements of the contract.

3.15 FIELD QUALITY CONTROL

3.15.1 Excavation

The Contractor shall establish and maintain quality control for excavation operations to assure compliance with contract requirements, and maintain records of the Contractor's quality control for all construction operations including but not limited to the following:

- a. Lines, grades and tolerances,
- b. Segregation of materials,
- c. Disposal and/or stockpiling of materials,
- d. Unsatisfactory materials,
- e. Conditions that may induce seepage or weaken the foundation or embankment,
- f. Stability of excavations.

Records of inspections and tests, as well as the records of corrective actions taken, shall be furnished to the Government in accordance with Section 01451 CONTRACTOR QUALITY CONTROL.

3.15.2 Embankment

3.15.2.1 General

As a part of the Contractor Quality Control (CQC) system required by SECTION 01451 CONTRACTOR QUALITY CONTROL, the Contractor shall establish and maintain field quality control for foundation preparation, embankment and backfill operations to assure compliance with contract requirements and maintain detailed records of field quality control for all operations including but not limited to the following:

- a. Earthwork Equipment
Type, size, number of units and suitability for construction of the prescribed work.
- b. Foundation Preparation
Methods of preparing the foundations in advance of embankment and backfill construction and methods for providing drainage of the

foundation and partially completed fills.

3.15.2.2 Materials Testing

The contractor shall perform sufficient testing to insure that the fill is being constructed as specified. The testing program specified below shall be considered the minimum acceptable frequency of testing. This does not relieve the Contractor from the responsibility of performing additional testing, if required to ensure compliance with these specifications.

a. Cohesive Material Testing

(1) Moisture Density Relationships. The moisture-density relations for each different classification of cohesive material utilized shall be determined in accordance with ASTM D 698, Methods A, B, or C. During fill placement a minimum of one additional moisture-density test shall be performed for every 7,500 cubic yard placed. Additional tests will be required each time a new material is encountered. The moisture-density curves will be compiled to form a family of curves which will be utilized to estimate optimum properties (maximum dry density and optimum moisture content) to be used with field density test.

(2) Water (Moisture) Content Tests. Determination of water content shall be performed in accordance with ASTM D 2216. ASTM D 4643 may be used when rapid moisture content results are needed. All rapid results obtained by ASTM D 4643 shall be confirmed by a test on a duplicate sample performed in accordance with ASTM D 2216. In the event of disagreement between the results, ASTM D 2216 shall govern. Backfill and fills not meeting the required specifications for water content shall be retested after corrective measures have been applied.

b. Additional Testing

The Contracting Officer may request additional tests if there is reason to doubt the adequacy of the compaction, or special compaction procedures are being used, or materials change or if the Contracting Officer determines that the Contractor's testing is inadequate or the Contractor is concentrating backfill and fill operations in a relatively small area.

3.15.2.3 Materials

Suitability of materials for use in embankment and backfill.

3.15.2.4 Fill Placement

Layout, maintaining existing drainage, thickness of layers, removal of oversized material, spreading and compaction for embankment and backfill.

3.15.2.5 Grade and Cross Section

Surveys to verify that the dimensions, slopes, lines and grades conform to those shown on the drawings.

3.15.2.6 Testing by the Government

During the life of this contract, the Government will perform quality assurance tests. The contractor shall make available to the government the equipment to perform these test.

3.15.2.7 Reporting

On a daily basis, the Contractor shall furnish the inspection records and all material testing results, the quantity of fill placed, as well as the records of corrective action taken, in accordance with Section 01451 CONTRACTOR QUALITY CONTROL.

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SECTION 02378A

GEOTEXTILES USED AS FILTERS

05/95

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.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 123	(1996a) Standard Terminology Relating to Textiles
ASTM D 4355	(1992) Deterioration of Geotextiles from Exposure to Ultraviolet Light and Water (Xenon-Arc Type Apparatus)
ASTM D 4533	(1991; R 1996) Trapezoid Tearing Strength of Geotextiles
ASTM D 4632	(1991; R 1996) Grab Breaking Load and Elongation of Geotextiles
ASTM D 4751	(1999) Determining Apparent Opening Size of a Geotextile
ASTM D 4833	(1988; R 1996) Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products
ASTM D 4873	(1997) Identification, Storage, and Handling of Geosynthetic Rolls
ASTM D 4884	(1996) Strength of Sewn or Thermally Bonded Seams of Geotextiles

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 1110-2-1601	(1991; Change 1-1994) Hydraulic Design of Flood Control Channels
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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 shall be

submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-04 Samples

Geotextile; G-AO

If requested, submit geotextile samples for testing to determine compliance with the requirements in this specification. When required, submit samples a minimum of 60 days prior to the beginning of installation of the same textile. Upon delivery of the geotextile, submit duplicate copies of the written certificate of compliance signed by a legally authorized official of the manufacturer. The certificate shall state that the geotextile shipped to the site meets the chemical requirements and exceeds the minimum average roll value listed in TABLE 1, MINIMUM PHYSICAL REQUIREMENTS FOR DRAINAGE GEOTEXTILE. Upon request, supply quality control and quality assurance tests for the geotextile. All samples provided shall be from the same production lot as will be supplied for the contract, and shall be the full manufactured width of the geotextile by at least 10 feet long, except that samples for seam strength may be a full width sample folded over and the edges stitched for a length of at least 5 feet. Samples submitted for testing shall be identified by manufacturers lot designation. For needle punched geotextile, the manufacturer shall certify that the geotextile has been inspected using permanent on-line metal detectors and does not contain any needles.

SD-07 Certificates

Geotextile; G-AO

Submit the manufacturer's certification of the geotextile material.

1.3 SHIPMENT, HANDLING, AND STORAGE

1.3.1 Shipment and Storage

Only approved geotextile rolls shall be delivered to the project site. All geotextile shall be labeled, shipped, stored, and handled in accordance with ASTM D 4873. No hooks, tongs, or other sharp instruments shall be used for handling geotextile.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Geotextile

2.1.1.1 General

The geotextile shall be a non-woven pervious sheet of plastic yarn as defined by ASTM D 123. The geotextile shall equal or exceed the minimum

average roll values listed in TABLE 1, MINIMUM PHYSICAL REQUIREMENTS FOR DRAINAGE GEOTEXTILE. Strength values indicated in the table are for the weaker principal direction.

TABLE 1
MINIMUM PHYSICAL REQUIREMENTS FOR DRAINAGE GEOTEXTILE

PROPERTY	UNITS	ACCEPTABLE VALUES	TEST METHOD
GRAB STRENGTH	lb	220	ASTM D 4632
PUNCTURE	lb	125	ASTM D 4833
TEAR	lb	100	TRAPEZOID ASTM D 4533
APPARENT OPENING SIZE	U.S. SIEVE	70	ASTM D 4751
ULTRAVIOLET DEGRADATION	Percent	50 AT 500 Hrs	ASTM D 4355

2.1.1.2 Geotextile Fiber

Fibers used in the manufacturing of the geotextile shall consist of a long-chain synthetic polymer composed of at least 85 percent by weight of polyolefins, polyesters, or polamides. Stabilizers and/or inhibitors shall be added to the base polymer if necessary to make the filaments resistant to deterioration caused by ultraviolet light and heat exposure. Reclaimed or recycled fibers or polymer shall not be added to the formulation. Geotextile shall be formed into a network such that the filaments or yarns retain dimensional stability relative to each other, including the edges. The edges of the geotextile shall be finished to prevent the outer fiber from pulling away from the geotextile.

2.1.2 Seams

The seams of the geotextile shall be either overlapped or sewn with thread of a material meeting the chemical requirements given above for geotextile yarn or shall be bonded by cementing or by heat. The sheets of geotextile shall be attached at the factory or another approved location, if necessary, to form sections not less than 12 feet wide. Seams shall be tested in accordance with method ASTM D 4884. The strength of the seam shall be not less than 90 percent of the required grab tensile strength of the unaged geotextile in any principal direction.

2.1.3 Securing Pins

The geotextile shall be secured to the embankment or foundation soil by

pins to prevent movement prior to placement of revetment materials. Other appropriate means to prevent movement such as staples, sand bags, and stone could also be used. Securing pins shall be inserted through both strips of overlapped geotextile along the line passing through midpoints of the overlap. Securing pins shall be removed as placement of revetment materials are placed to prevent tearing of geotextile or enlarging holes maximum spacing between securing pins depends on the steepness of the embankment slope. The maximum pins spacing shall be equal to or less than the values listed in TABLE 2, MAXIMUM SPACING FOR SECURING PINS. When windy conditions prevail at the construction site, the number of pins should be increased upon the demand of the Contracting Officer. Terminal ends of the geotextile shall be anchored with key trench or apron at crest, toe of the slope and upstream and downstream limits of installation.

TABLE 2
MAXIMUM SPACING FOR SECURING PINS

EMBANKMENT	SPACING, feet
STEEPER THAN 1V ON 3H	2
1V ON 3H TO 1V ON 4H	3
FLATTER THAN 1V ON 4H	5

2.2 INSPECTIONS, VERIFICATIONS, AND TESTING

2.2.1 Manufacturing and Sampling

Geotextiles and factory seams shall meet the requirements specified in TABLE 1, MINIMUM PHYSICAL REQUIREMENTS FOR DRAINAGE GEOTEXTILE. Conformance testing shall be performed in accordance with the manufacturers approved quality control manual.

2.2.2 Site Verification and Testing

Samples shall be collected at approved locations upon delivery to the site at the request of the Contracting Officer. Samples shall be tested to verify that the geotextile meets the requirements specified in TABLE 1, MINIMUM PHYSICAL REQUIREMENTS FOR DRAINAGE GEOTEXTILE. Samples shall be identified by manufacturers name, type of geotextile, lot number, roll number, and machine direction. Testing, if considered necessary by the Contracting Officer, shall be performed by the Contracting Officer at an approved laboratory.

PART 3 EXECUTION

3.1 SURFACE PREPARATION

Surface on which the geotextile will be placed shall be prepared to a relatively smooth surface condition, in accordance with the applicable

portion of this specification and shall be free from obstruction, debris, depressions, erosion feature, or vegetation. Any irregularities will be removed so as to insure continuous, intimate contact of the geotextile with all the surface. Any loose material, soft or low density pockets of material, will be removed; erosion features such as rills, gullies etc. must be graded out of the surface before geotextile placement.

3.2 INSTALLATION OF THE GEOTEXTILE

3.2.1 General

The geotextile shall be placed in the manner and at the locations shown. At the time of installation, the geotextile shall be rejected if it has defects, rips, holes, flaws, deterioration or damage incurred during manufacture, transportation or storage.

3.2.2 Placement

The geotextile shall be placed with the long dimension perpendicular to the centerline of the channel and laid smooth and free of tension, stress, folds, wrinkles, or creases. If the Contractor elects to overlap the seams versus sew them, the strips shall be placed to provide a minimum width of 18 inches of overlap for each joint. The placement procedure requires that the length of the geotextile be approximately 5 percent greater than the slope length. The Contractor shall adjust the actual length of the geotextile used based on initial installation experience. Temporary pinning of the geotextile to help hold it in place until the riprap is placed shall be allowed. The temporary pins shall be removed as the riprap is placed to relieve high tensile stress which may occur during placement of material on the geotextile. Design protection of riprap should be in compliance with EM 1110-2-1601. Trimming shall be performed in such a manner that the geotextile shall not be damaged in any way.

3.3 PROTECTION

The geotextile shall be protected at all times during construction from contamination by surface runoff and any geotextile so contaminated shall be removed and replaced with uncontaminated geotextile. Any damage to the geotextile during its installation or during placement of riprap shall be replaced by the Contractor at no cost to the Government. The work shall be scheduled so that the covering of the geotextile with a layer of the specified material is accomplished within 2 calendar days after placement of the geotextile. Failure to comply shall require replacement of geotextile. The geotextile shall be protected from damage prior to and during the placement of riprap or other materials. This may be accomplished by limiting the height of drop to less than 1 foot, by placing a cushioning layer of sand or gravel on top of the geotextile before placing the material, or other methods deemed necessary. Care should be taken to ensure that the utilized cushioning materials shall not impede the flow of water. Before placement of riprap or other materials, the Contractor shall demonstrate that the placement technique will not cause damage to the geotextile. In no case shall any type of equipment be allowed on the unprotected geotextile.

3.4 PLACEMENT OF CUSHIONING MATERIAL

The Contractor shall utilize a cushioning layer, placing of cushioning material shall be performed in a manner to insure intimate contact of the geotextile with the prepared surface and with the cushioning material. The placement shall also be performed in a manner that shall not damage the geotextile including tear, puncture, or abrasion. On sloping surfaces the cushioning material shall be placed from the bottom of the slopes upward. During placement, the height of the drop of riprap material shall not be greater than 12 inches. Any geotextile damaged beneath the cushioning material shall be uncovered as necessary and replaced at no cost to the Government.

3.5 OVERLAPPING AND SEAMING

3.5.1 Overlapping

If the Contractor overlaps the seams versus sewing them, the overlap of geotextile rolls shall be 12 inches. Appropriate measures will be taken to insure required overlap exists after cushion placement.

3.5.2 Sewn Seams

If the Contractor elects to sew the seams, high strength thread should be used such that seam test should conform to ASTM D 4884. The thread shall meet the chemical, ultraviolet, and physical requirements of the geotextile, and the color shall be different from that of the geotextile. The seam strength shall be equal to the strength required for the geotextile in the direction across the seam. Overlapping J-type seams are preferable over prayer-type seams as the overlapping geotextile reduces the chance of openings to occur at the seam. Double sewing shall be used specially for field seams to provide a safety factor against undetected missed stitches.

-- End of Section --

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SECTION 02457N

STEEL SHEET PILES

09/99

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SECTION 02457N

STEEL SHEET PILES
09/99

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 WELDING SOCIETY (AWS)

AWS D1.1/D1.1M (2002) Structural Welding Code - Steel

ASTM INTERNATIONAL (ASTM)

ASTM A 328/A 328M (2003) Steel Sheet Piling

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Steel sheet piles;G-AO

Submit drawings for approval prior to start of the work or ordering materials. Include details of top protection, special reinforcing tips, tip protection, lagging, splices, fabricated additions to plain piles and driving, cut-off method, and corrosion protection. Drawings for sheet piling including fabricated sections shall show complete dimensions including minimum section properties and details of piling and the driving sequence and location of piling. Include details and dimensions of templates and other temporary guide structures for installing the piling. Provide details of the method of handling piling to prevent permanent deflection, distortion or damage to piling interlocks.

SD-07 Certificates

Pile pulling method;; G-AO

Material certificates; G-AO

Pile driving equipment; G-AO

SD-11 Closeout Submittals

Pile driving record; G-AO

1.3 DELIVERY AND STORAGE

Handle piling using handling holes or lifting devices. Handle long length piles with care to prevent damage. Support on level blocks or racks spaced not more than 10 feet apart and not more than 2 feet from the ends. Supports between multiple lifts shall be in a vertical plane. Protect piling to prevent damage to coatings and to prevent corrosion prior to installation.

1.4 QUALITY ASSURANCE

1.4.1 Material Certificates

Submit for each shipment certificates and identified with specific lots prior to installing piling. Identification data should include piling type, dimensions, chemical composition, mechanical properties, section properties, heat number, and mill identification mark.

1.5 EQUIPMENT

1.5.1 Pile Driving Equipment

Submit descriptions of pile driving equipment to be employed in the work to the Contracting Officer for approval. Descriptive information includes manufacturer's name, model numbers, capacity, rated energy, hammer details, cushion material, helmet, and templates.

PART 2 PRODUCTS

2.1 STEEL SHEET PILES

Meet the requirements specified herein. Heavy gage hot-rolled sheet piling shall conform to ASTM A 328/A 328M. The interlock of sheet piling shall be free-sliding, allow a swing angle of at least 5 degrees when threaded and maintain continuous interlocking when installed. Sheet piling shall be full-length sections of the dimensions shown. Provide sheet piling with standard pulling holes. Metalwork fabrication for sheet piling sections shall conform to the requirements herein.

PART 3 EXECUTION

3.1 EARTHWORK

Perform in accordance with Section 02331A LEVEE EMBANKMENT AND EARTHWORK.

3.2 INSTALLATION

3.2.1 Pile Hammer

Use a pile hammer having a delivered force or energy suitable for the total weight of the pile and the character of subsurface material to be encountered. Operate hammer at the rate(s) recommended by the manufacturer throughout the entire driving period. Repair damage to piling caused by use of a pile hammer with excess delivered force or energy.

3.2.2 Pile Protection

Use a protecting cap during driving to prevent damage to the top of the sheet piling.

3.2.3 Pile Driving

Maintain piling vertical during driving. Drive piles in such a manner as to prevent damage to the piles and to provide a continuous closure. Where possible, drive Z-pile with the ball end leading. If an open socket is leading, a bolt or similar object placed in the bottom of the interlock will minimize packing material into it and ease driving for the next sheet. Incrementally sequence driving of individual piles such that the tip of any sheet pile shall not be more than 4 feet below that of any adjacent sheet pile. When the penetration resistance exceeds five blows per inch, the tip of any sheet pile shall not be more than 2 feet below any adjacent sheet pile.

3.2.4 Jetting of Piles

Jetting will not be permitted.

3.2.5 Pre-Augering or Spudding of Piles

Pre-augering or spudding of piles will not be permitted.

3.2.6 Cutting and Splicing

Piles driven below the required top elevation and piles damaged by driving and cut off to permit further driving shall be extended as required to reach the top elevation by splicing when directed by the Contracting Officer. If directed by the Contracting Officer, splice piles as required to drive them to depths greater than shown on the drawings and extend them up to the required top elevation. Piles adjoining spliced piles shall be full length unless otherwise approved. Ends of piles to be spliced shall be squared before splicing to eliminate dips or camber. Splice piles with concentric alignment of the interlocks so that there are no discontinuities, dips or camber at the abutting interlocks. Spliced piles shall be free sliding and able to obtain the maximum swing with contiguous piles. Trim the tops of piles excessively battered during driving, when directed at no cost to the Government. Pile cut-offs shall become the property of the Contractor and shall be removed from the site. Use a straight edge in cutting by burning to avoid abrupt nicks. Holes other than bolt holes shall be reasonably smooth and the proper size for rods or other items to be inserted. Do not use explosives for cutting.

3.2.7 Welding

Shop and field welding, qualification of welding procedures, welders, and welding operators shall be in accordance with AWS D1.1/D1.1M.

3.2.8 Tolerances in Driving

Drive all piles with a variation from vertical of not more than 1/4 inch per foot. Place the pile so the face will not be more than 6 inches from vertical alignment at any point. Top of pile at elevation of cut-off shall be within 1/2 inch horizontally and 2 inches vertically of the location indicated. Manipulation of piles to force them into position will not be permitted. Check all piles for heave. Redrive all heaved piles to the required tip elevation.

3.3 INSPECTION

Perform continuous inspection during pile driving. Inspect all piles for compliance with tolerance requirements. Bring any unusual problems which may occur to the attention of the Contracting Officer.

3.3.1 Inspection of Driven Piling

The Contractor shall inspect the interlocks of the portion of driven piles that extend above ground. Remove and replace piles found to be out of interlock.

3.3.2 Pulling and Redriving

The Contractor may be required to pull selected piles after driving to determine the condition of the underground portions of piles. The pile pulling method must be approved by the Contracting Officer. Remove and replace at the Contractor's expense any pile pulled and found to be damaged to the extent that its usefulness in the structure is impaired. Redrive piles pulled and found to be in satisfactory condition when directed by the Contracting Officer.

3.4 INSTALLATION RECORDS

Maintain a pile driving record for each sheet pile. Indicate on the installation record installation dates and times, type and size of hammer, rate of operation, total driving time, dimensions of driving helmet and cap used, blows required per foot for each foot of penetration, final driving resistance in blows for final 6 inches, pile locations, tip elevations, ground elevations, cut-off elevations, and any reheading or cutting of piles. Record any unusual pile driving problems during driving. Submit complete records to the Contracting Officer.

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SECTION 02562

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SECTION 02562

(NEBRASKA) PAVEMENTS FOR SMALL PROJECTS
05/02

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.

NEBRASKA DEPARTMENT OF ROADS (NDR)

NDR Standard Specifications for Highway
Construction, 1997 Edition

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
(AASHTO)

AASHTO MP 1 (1998) Provisional Specification for
Performance Graded Asphalt Binder

AASHTO T 180 (1997) Moisture-Density Relations of Soils
Using a 4.54-kg (10-lb) Rammer and an 457
mm (18-in) Drop

AASHTO TP53 (1998; Interim 1999) Determining Asphalt
Content of Hot Mix Asphalt by the Ignition
Method

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 136 (2001) Sieve Analysis of Fine and Coarse
Aggregates

ASTM C 566 (1997) Total Evaporable Moisture Content
of Aggregate by Drying

ASTM D 977 (1998) Emulsified Asphalt

ASTM D 1461 (1985; R 2001) Moisture or Volatile
Distillates in Bituminous Paving Mixtures

ASTM D 1557 (2000) Laboratory Compaction
Characteristics of Soils Using Modified
Effort (56,000 ft-lbf/ft (2,700 kN-m/m))

ASTM D 2027	(1997) Cutback Asphalt (Medium-Curing Type)
ASTM D 2028	(1997) Cutback Asphalt (Rapid-Curing Type)
ASTM D 2041	(2000) Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
ASTM D 2172	(1995) Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
ASTM D 2397	(1998) Cationic Emulsified Asphalt
ASTM D 2726	(2000) Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixture
ASTM D 2950	(1991; R 1997) Density of Bituminous Concrete in Place by Nuclear Method
ASTM D 3381	(1992; 1999) Viscosity-Graded Asphalt Cement for Use in Pavement Construction
ASTM D 3666	(2001) Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials
ASTM D 4125	(1994) Asphalt Content of Bituminous Mixtures by the Nuclear Method
ASTM D 4867/D 4867M	(1996) Effect of Moisture on Asphalt Concrete Paving Mixtures
ASTM D 5444	(1998) Mechanical Size Analysis of Extracted Aggregate
ASTM D 6307	(1998) Asphalt Content of Hot Mix Asphalt by Ignition Method

ASPHALT INSTITUTE (AI)

AI MS-2	(1994) Mix Design Methods for Asphalt Concrete and Other Hot-Mix Types
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1.2 MEASUREMENT AND PAYMENT

Section "MEASUREMENT AND PAYMENT" of the NDR shall not apply. "Method of Measurement" and "Basis of Payment" paragraphs in the NDR shall not apply.

1.3 MODIFICATION TO THE NDR

Reference to "Engineer" and "Department" in the NDR shall mean the Contracting Officer or Representative.

1.4 DEFINITIONS

For the purposes of this specification, the following definitions apply.

1.4.1 Degree of Compaction

Degree of compaction of aggregate base course shall be expressed as a percentage of the maximum density obtained by the test procedure presented in either ASTM D 1557 or AASHTO T 180, Method D. The maximum density shall be determined in accordance with ASTM D 1557 if the material gradation contains less than 30 percent retained on the 3/4 inch sieve or AASHTO T 180 if the material gradation contains more than 30 percent retained on the 3/4 inch sieve. In this specification, degree of compaction shall be a percentage of laboratory maximum density.

1.5 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 shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Plant, Equipment, and Tools

Job Mix Formula; G-DO.

Proposed JMF.

Mixture Proportions; G-DO.

The report of the Contractor's mixture proportioning studies showing the proportions of all ingredients and supporting information on aggregate and other materials that will be used in the manufacture of concrete, at least 14 days prior to commencing concrete placing operations.

SD-06 Test Reports

Initial Tests; G-AO.

Certified copies of test results for approval not less than 20 days before material is required for the work.

Contractor Quality Control; G-AO.

The Contractor shall submit all QC test results to the Contracting Officer on a daily basis as the tests are performed.

Acceptability of Work; G-AO.

The Contractor shall submit all test results to the Contracting Officer on a daily basis as the tests are performed.

SD-07 Certificates

Asphalt Cement Binder; G-AO.

Copies of certified test data.

Bituminous Tack and Prime Coat; G-AO.

Copies of certified test data.

SD-08 Manufacturer's Instructions

Manufacturer's Recommendations; G-AO

Where installation procedures, or any part thereof, are required to be in accordance with the manufacturer's recommendations, printed copies of these recommendations, 20 days prior to use on the project. Installation of the material will not be allowed until the recommendations are received. Failure to furnish these recommendations can be cause for rejection of the material.

1.6 SAMPLING AND TESTING

Sampling and testing shall be the responsibility of the Contractor. Sampling and testing shall be performed by a testing laboratory approved in accordance with Section 01451A CONTRACTOR QUALITY CONTROL. Work requiring testing will not be permitted until the testing laboratory has been inspected and approved. The materials shall be tested to establish compliance with the specified requirements; testing shall be performed at the specified frequency. The Contracting Officer may specify the time and location of the tests.

1.7 APPROVAL OF MATERIAL

The source of the material for aggregate base course shall be selected 30 days prior to the time the material will be required in the work. Tentative approval of material will be based on initial test results. Final approval of the materials will be based on sieve analysis, liquid limit, and plasticity index tests performed on samples taken from the completed and fully compacted base course.

1.8 WEATHER LIMITATIONS

1.8.1 Hot-Mix Asphalt Pavement

The hot-mix asphalt pavement shall not be placed upon a wet surface or when the surface temperature of the underlying course is less than specified in Table 1. The temperature requirements may be waived by the Contracting Officer, if requested; however, all other requirements, including compaction, shall be met.

Table 1. Surface Temperature Limitations of Underlying Course

<u>Mat Thickness, inches</u>	<u>Degrees F</u>
3 or greater	40
Less than 3	45

1.8.2 Bituminous Prime and Tack Coat

Bituminous coat shall be applied only when the surface to receive the bituminous coat is dry. Bituminous coat shall be applied only when the atmospheric temperature in the shade is 50 degrees F or above and when the temperature has not been below 35 degrees F for the 12 hours prior to application.

1.8.3 Base Course

Construction of aggregate base course shall be done when the atmospheric temperature is above 35 degrees F. When the temperature falls below 35 degrees F, the Contractor shall protect all completed areas by approved methods against detrimental effects of freezing. Completed areas damaged by freezing, rainfall, or other weather conditions shall be corrected to meet specified requirements.

1.9 PLANT, EQUIPMENT, AND TOOLS

All plant, equipment, and tools used in the performance of the work shall be subject to approval before the work is started and shall be maintained in satisfactory working condition at all times. The equipment shall be adequate and shall have the capability of producing pavements meeting the requirements as set forth herein.

PART 2 PRODUCTS

2.1 HOT-MIX ASPHALT PAVEMENT

Bituminous wearing course shall conform to the requirements in Section 1028, "ASPHALTIC CONCRETE" of the NDR except as modified herein. Hot-mix asphalt shall conform to the requirements of mix type 14 in Table 1028.01 of the NDR except as modified herein. Aggregate type and gradation shall meet the requirements of paragraphs 1, 2 and 4 and Table 1033.04A of Subsection 1033.02 "Material Characteristics" of the NDR except as modified herein. The Contractor shall develop the mix design. Submittal of aggregate samples is not required. The laboratory used to develop the job mix formula (JMF) shall meet the requirements of ASTM D 3666. A certification signed by the manager of the laboratory stating that it meets these requirements or clearly listing all deficiencies shall be submitted to the Contracting Officer prior to the start of construction. The asphalt mix shall be dense-graded and composed of a mixture of well-graded aggregate, mineral filler if required, and asphalt material. The hot-mix asphalt shall be designed using Marshall method of mix design contained in AI MS-2 and the criteria shown in Table 3. If the Tensile Strength Ratio (TSR) of the composite mixture, as determined by ASTM D 4867/D 4867M is

less than 75, the aggregates shall be rejected or the asphalt mixture treated with an approved anti-stripping agent. The amount of anti-stripping agent added shall be sufficient to produce a TSR of not less than 75. If an antistrip agent is required, it shall be provided by the Contractor at no additional cost. The hot-mix asphalt pavement shall not contain more than 15 percent reclaimed asphalt pavement.

2.1.1.1 JMF Requirements

The job mix formula shall be submitted in writing by the Contractor for approval at least 14 days prior to the start of the test section and shall include as a minimum:

- a. Percent passing each sieve size.
- b. Percent of asphalt cement.
- c. Percent of each aggregate and mineral filler to be used.
- d. Asphalt viscosity grade or performance grade.
- e. Number of blows of hammer per side of molded specimen.
- f. Laboratory mixing temperature.
- g. Lab compaction temperature.
- h. Temperature-viscosity relationship of the asphalt cement.
- i. Plot of the combined gradation on the 0.45 power gradation chart, stating the nominal maximum size.
- j. Graphical plots of stability, flow, air voids, voids in the mineral aggregate, and unit weight versus asphalt content as shown in AI MS-2.
- k. Specific gravity and absorption of each aggregate.
- l. Percent natural sand.
- m. Percent particles with 2 or more fractured faces (in coarse aggregate).
- n. Fine aggregate angularity.
- o. Percent flat or elongated particles (in coarse aggregate).
- p. Tensile Strength Ratio(TSR).
- q. Antistrip agent (if required) and amount.
- r. List of all modifiers and amount.
- s. Percentage and properties (asphalt content, binder properties, and

aggregate properties) of reclaimed asphalt pavement (RAP) if RAP is used.

Table 2. Marshall Design Criteria

<u>Test Property</u>	<u>50 Blow Mix</u>
Stability, pounds minimum	*1000
Flow, 0.01 inch	8-18
Air voids, percent	3-5
Percent Voids in mineral aggregate VMA, (minimum) Band "A" Mix	16.0
TSR, minimum percent	75

* This is a minimum requirement. The average during construction shall be significantly higher than this number to ensure compliance with the specifications.

** Calculate VMA in accordance with AI MS-2, based on ASTM D 2726 bulk specific gravity for the aggregate.

2.1.2 Adjustments to Field JMF

The Laboratory JMF for each mixture shall be in effect until a new formula is approved in writing by the Contracting Officer. Should a change in sources of any materials be made, a new laboratory jmf design shall be performed and a new JMF approved before the new material is used.

2.1.3 Asphalt Cement Binder

Asphalt cement binder shall conform to either ASTM D 3381 Table 2, Viscosity Grade AC-10 or AASHTO MP 1 Performance Grade (PG) 58-28. Asphalt cement shall conform to the requirements specified in Section 1029, "Asphalt Cement" of the NDR. Test data indicating grade certification shall be provided by the supplier at the time of delivery of each load to the mix plant. Copies of these certifications shall be submitted to the Contracting Officer. The supplier is defined as the last source of any modification to the binder.

2.2 BITUMINOUS TACK AND PRIME COAT

Test data indicating grade certification shall be provided by the supplier. Copies of these certifications shall be submitted to the Contracting Officer.

2.2.1 Bituminous Prime Coat

Bituminous materials shall be liquid asphalt conforming to the requirements of ASTM D 2027, designation MC-30, or MC-70 at the Contractor's option, except that only MC-30 shall be used on dense graded base courses if MC-70 does not adequately penetrate the base course material. In lieu of cut-back asphalt, the Contractor may use cationic emulsified asphalt conforming to the requirements of ASTM D 2397, designation CSS-1 or CSS-1h or emulsified asphalt conforming to the requirements of ASTM D 977, designation SS-1 or SS-1h.

2.2.2 Bituminous Tack Coat

Bituminous material shall be cutback asphalt conforming to the requirements of ASTM D 2028, designation RC-70 or RC-250; emulsified asphalt conforming to the requirements of ASTM D 977, designation SS-1 or SS-1h; or cationic emulsified asphalt conforming to the requirements of ASTM D 2397, designation CSS-1 or CSS-1h.

2.3 AGGREGATE BASE COURSE (ABC)

Crushed rock and crushed rock screenings for aggregate base course shall conform to the requirements specified in Subsection 1033.02, paragraphs 1, 2, and 8 of the NDR, except as modified herein. The portion retained on the No. 4 sieve shall be known as coarse aggregate; that portion passing the No. 4 sieve shall be known as fine aggregate. Aggregates shall be angular particles of uniform density. Coarse aggregate shall be crushed stone. Fine aggregate shall consist of screenings, angular sand, crushed recycled concrete fines, or other finely divided mineral matter processed or naturally combined with the coarse aggregate. The amount of flat and elongated particles shall not exceed 30 percent. A flat particle is one having a ratio of width to thickness greater than 3; an elongated particle is one having a ratio of length to width greater than 3. In the portion retained on each sieve specified, the crushed aggregates shall contain at least 50 percent by weight of crushed pieces having two or more freshly fractured faces with the area of each face being at least equal to 75 percent of the smallest midsectional area of the piece. When two fractures are contiguous, the angle between planes of the fractures must be at least 30 degrees in order to count as two fractured faces. The portion of the material passing the No. 40 sieve shall have liquid limit not greater than 25 and a plasticity index not greater than 5. When tested for gradation, the percentage passing the No. 200 sieve shall not exceed 10 percent and the 0.02 mm sieve shall not exceed 3.0 percent.

2.4 INITIAL TESTS

One of each of the following tests shall be performed on the proposed aggregate base course material prior to commencing construction to demonstrate that the proposed material meets all specified requirements when furnished. If materials from more than one source are going to be utilized, this testing shall be completed for each source.

- a. Sieve Analysis including 0.02 mm size material.
- b. Liquid limit and plasticity index moisture-density relationship.

- c. Moisture-density relationship.
- d. Wear.
- e. Soundness.

PART 3 EXECUTION

3.1 PAVEMENT REMOVAL

Where bituminous pavement is to be removed to allow for the installation of the retaining wall, the pavement shall be sawed with a pre-approved concrete saw so as to leave a straight true edge. The pavement material shall be removed in a manner that will not damage the adjacent in-place pavement to remain. Pavement material from the removal area shall be disposed of outside the limits of Government controlled land at the Contractor's expense.

3.2 HOT-MIX ASPHALT PAVEMENT

Hot-mix asphalt pavement wearing course shall be constructed to the requirements specified in the NDR, Section 501, "GENERAL REQUIREMENTS" and Section 503, "ASPHALTIC CONCRETE", except as modified herein. Paragraph 9 of Section 503.03 and paragraphs 2, 5c, 8 and 9 of Section 503.04 are not applicable.

3.2.1 Contractor Quality Control

A standard lot for all requirements will be equal to 8 hours of production.

3.2.1.1 Asphalt Content

A minimum of two tests to determine asphalt content will be performed per lot by one of the following methods: the extraction method in accordance with ASTM D 2172, Method A or B, the ignition method in accordance with the AASHTO TP53 or ASTM D 6307, or the nuclear method in accordance with ASTM D 4125, provided the nuclear gauge is calibrated for the specific mix being used. For the extraction method, the weight of ash, as described in ASTM D 2172, shall be determined as part of the first extraction test performed at the beginning of plant production; and as part of every tenth extraction test performed thereafter, for the duration of plant production. The last weight of ash value obtained shall be used in the calculation of the asphalt content for the mixture.

3.2.1.2 Gradation

Aggregate gradations shall be determined a minimum of twice per lot from mechanical analysis of recovered aggregate in accordance with ASTM D 5444. When asphalt content is determined by the nuclear method, aggregate gradation shall be determined from hot bin samples on batch plants, or from the cold feed on drum mix plants. For batch plants, aggregates shall be tested in accordance with ASTM C 136 using actual batch weights to determine the combined aggregate gradation of the mixture.

3.2.1.3 Temperatures

Temperatures shall be checked at least four times per lot, at necessary locations, to determine the temperature at the dryer, the asphalt cement in the storage tank, the asphalt mixture at the plant, and the asphalt mixture at the job site.

3.2.1.4 Aggregate Moisture

The moisture content of aggregate used for production shall be determined a minimum of once per lot in accordance with ASTM C 566.

3.2.1.5 Moisture Content of Mixture

The moisture content of the mixture shall be determined at least once per lot in accordance with ASTM D 1461 or an approved alternate procedure.

3.2.1.6 Laboratory Air Voids, Marshall Stability and Flow

Mixture samples shall be taken at least four times per lot and compacted into specimens, using 50 blows per side with the Marshall hammer. After compaction, the laboratory air voids of each specimen shall be determined, as well as the Marshall stability and flow.

3.2.2 Acceptability of Work

The pavement will be accepted on the basis of tests made by the the Contractor or its suppliers, as specified herein. The Government may, at its discretion, make check tests to validate the results of the Contractor's testing.

3.2.2.1 Sampling Pavements

Samples of the finished pavement, shall be obtained by the Contractor. The location of the samples shall be as directed and the cores shall be at least 4 inches in diameter. The samples shall be tested by the Contractor to determine conformance to density. Specimens shall be tested in accordance with the requirements of ASTM D 2726. Three samples shall be taken and tested for each 750 tons or less of bituminous mixture placed each day. A minimum of one core shall be obtained from the longitudinal joint. The Contractor shall fill all cores holes with new material and shall meet the requirements as described herein.

3.2.2.2 Laboratory Air Voids

Laboratory air voids will be calculated by determining the Marshall density of each laboratory compacted specimen using ASTM D 2726 and determining the theoretical maximum density of every other subplot sample using ASTM D 2041.

Laboratory air void calculations for each subplot will use the latest theoretical maximum density values obtained, either for that subplot or the previous subplot. The mean absolute deviation of the four laboratory air void contents (one from each subplot) from the JMF air void content will be evaluated. The mean absolute deviation shall be less than 1.00. All laboratory air void tests will be completed and reported within 24 hours

after completion of construction of each lot.

3.2.2.3 In-place Density

Density of the compacted mixture of the bituminous wearing course shall be between 97 and 100 percent (joint density 95 to 100 percent) of the maximum laboratory compacted density. The maximum laboratory compacted specimens shall be determined from the same mixture taken from the plant in accordance with ASTM D 2041. Densities of the in-place compacted mixture may be determined by the nuclear method in accordance with ASTM D 2950 for Contractor quality control purposes. In any event, the basis of acceptance for density shall be determined from the specific gravity method.

3.2.2.4 Surface Smoothness

After the final rolling, but not later than 24 hours after placement, the surface of the pavement in each entire lot shall be tested by the Contractor in such a manner as to reveal all surface irregularities exceeding the tolerances specified below. If any pavement areas are ground, these areas shall be retested immediately after grinding. All testing shall be performed in the presence of the Contracting Officer. Detailed notes of the results of the testing shall be kept and a copy furnished to the Government immediately after each day's testing. The entire area of the pavement shall be tested in both a longitudinal and a transverse direction on parallel lines. The transverse lines shall be 25 feet or less apart, as directed. The longitudinal lines shall be at the centerline of each paving lane for lines less than 20 feet and at the third points for lanes 20 feet or greater. Other areas having obvious deviations shall also be tested. Longitudinal testing lines shall be continuous across all joints. Where drawings show required deviations from a plane surface (crowns, drainage inlets, etc.), the surface shall be finished to meet the approval of the Contracting Officer. The straightedge shall be held in contact with the surface and moved ahead one-half the length of the straightedge for each successive measurement. The amount of surface irregularity shall be determined by placing the freestanding (unleveled) straightedge on the pavement surface and allowing it to rest upon the two highest spots covered by its length, and measuring the maximum gap between the straightedge and the pavement surface in the area between these two high points. The finished surfaces of the pavements shall have no abrupt change of 3/16 inch or more, and all pavements shall be within the tolerances specified in Table 3 when checked with an approved 10 foot straightedge.

Table 3. Straightedge Surface Smoothness--Pavements

Pavement Category	Direction of Testing	Tolerance, inches
All paved areas	Longitudinal	3/16
	Transverse	3/16

3.3 BITUMINOUS TACK AND PRIME COAT

Following application of the bituminous material and prior to the application of the succeeding layer of pavement, the bituminous coat shall

be allowed to cure and to obtain evaporation of any volatiles or moisture.

3.3.1 Application Temperature

3.3.1.1 Viscosity Relationship

Asphalt application temperature shall provide an application viscosity between 10 and 60 seconds, Saybolt Furol, or between 20 and 120 centistokes, kinematic. The temperature viscosity relation shall be furnished to the Contracting Officer.

3.3.1.2 Temperature Ranges

The viscosity requirements shall determine the application temperature to be used. The following is a normal range of application temperatures:

Liquid Asphalts	

MC-30	85-190 degrees F
MC-70	120-225 degrees F
Paving Grade Asphalts	

Emulsions	

SS-1	70-160 degrees F
SS-1h	70-160 degrees F
CSS-1	70-160 degrees F
CSS-1h	70-160 degrees F

*These temperature ranges exceed the flash point of the material and care should be taken in their heating.

3.3.2 General

Following preparation and subsequent inspection of the surface, the bituminous coat shall be applied at the specified rate with uniform distribution over the surface to be treated. All areas and spots missed by the distributor shall be properly treated with the hand spray. Until the succeeding layer of pavement is placed, the surface shall be maintained by protecting the surface against damage and by repairing deficient areas at no additional cost to the Government. If required, clean dry sand shall be spread to effectively blot up any excess bituminous material. No smoking, fires, or flames other than those from the heaters that are a part of the equipment shall be permitted within 25 feet of heating, distributing, and transferring operations of bituminous material other than bituminous emulsions. All traffic, except for paving equipment used in constructing the surfacing, shall be prevented from using the underlying material, whether primed or not, until the surfacing is completed. The bituminous coat shall conform to all requirements as described herein.

3.3.3 Bituminous Tack Coat

Contact surfaces of previously constructed pavement, curbs, manholes, and

other structures shall be sprayed with a thin coat of bituminous tack coat. Rate of application shall be not less than 0.05 gallon nor more than 0.15 gallon per square yard.

3.3.4 Bituminous Prime Coat

A prime coat will be required if it will be at least seven days before a the surfacing (Asphalt cement hot mix concrete) layer is constructed on the underlying (base course, etc) compacted material. The type of liquid asphalt and application rate will be as specified herein. The Contractor shall protect the underlying from any damage (water, traffic, etc.) until the surfacing is placed. If the Contractor places the surfacing within seven days, the choice of protection measures or actions to be taken is at the Contractor's option. Damage to the underlying material caused by lack of, or inadequate, protection shall be repaired (recompacted or replaced) by approved methods at no additional cost to the Government. If the Contractor options to use the prime coat, it shall be applied as soon as possible after consolidation of the underlying material. Rate of application shall be not less than 0.15 gallon nor more than 0.40 gallon per square yard. To obtain uniform application of the prime coat on the surface treated at the junction of previous and subsequent applications, building paper shall be spread on the surface for a sufficient distance back from the ends of each application to start and stop the prime coat on the paper. Immediately after application, the building paper shall be removed and destroyed. Prime coat shall be allowed to cure without being disturbed for a period of at least 48 hours or longer, as may be necessary to attain penetration into the treated course.

3.4 AGGREGATE COURSES

Except as otherwise specified herein, aggregate base course shall be constructed in accordance with the requirements specified in subsections 301.01 "General" and 301.02 "Equipment" of the NDR. Construction of aggregate base course shall conform to the additional requirements of section 305 "CRUSHED ROCK BASE COURSE" of the NDR except as otherwise specified herein. The aggregate base course shall be compacted to 100 percent of laboratory maximum density.

3.4.1 Acceptability of Work

The aggregate base course will be accepted on the basis of tests made by the Contractor as specified herein. The Government may, at its discretion, make check tests to validate the results of the Contractor's testing.

3.4.1.1 In-Place Tests

One of each of the following tests shall be performed on samples taken from the placed and compacted aggregate course. Samples shall be taken and tested at the rates indicated for each layer of material placed.

a. Density tests shall be performed on every lift of material placed and at a frequency of one set of tests for every 250 square yards, or portion thereof, of completed area.

b. Sieve Analysis including No. 635 size material shall be performed on every lift of material placed and at a frequency of one test for every 1000 square meters, or portion thereof, of completed area for every 500 tons, or portion thereof, of material placed.

c. Liquid limit and plasticity index tests shall be performed at the same frequency as the sieve analysis.

3.4.1.2 Thickness

The total compacted thickness of the aggregate course shall be within 1/2 inch of the existing base course thickness. Where the measured thickness is more than 1/2 inch deficient, such areas shall be corrected by scarifying, adding new material of proper gradation, reblading, and recompacting as directed. Where the measured thickness is more than 1/2 inch thicker than indicated, the course shall be considered as conforming to the specified thickness requirements. Average job thickness shall be the average of all thickness measurements taken for the job, but shall be within 1/4 inch of the thickness indicated. The total thickness of the aggregate course shall be measured at intervals in such a manner as to ensure one measurement for each 500 square yards of aggregate course. Measurements shall be made in 3 inch diameter test holes penetrating the aggregate course.

3.4.1.3 Smoothness

The surface of the top layer shall show no deviations in excess of 3/8 inch when tested with a 10 foot straightedge applied parallel with and at right angles to the centerline of the area to be paved. Measurements shall be taken in successive positions parallel to the centerline of the area to be paved. Measurements shall also be taken perpendicular to the centerline at 50 foot intervals. Deviations exceeding this amount shall be corrected by removing material and replacing with new material, or by reworking existing material and compacting it to meet these specifications.

-- End of Section --

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SECTION 02630

STORM DRAINAGE

07/03

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 ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
(AASHTO)

AASHTO M 198 (2003) Joints for Concrete Pipe, Manholes and Precast Box Sections Using Preformed Flexible Joint Sealants

ASTM INTERNATIONAL (ASTM)

ASTM A 74 (2003b) Cast Iron Soil Pipe and Fittings

ASTM C 1103 (2002) Joint Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines

ASTM C 231 (2003) Air Content of Freshly Mixed Concrete by the Pressure Method

ASTM C 443 (2002) Joints for Concrete Pipe and Manholes, Using Rubber Gaskets

ASTM C 478 (2003) Precast Reinforced Concrete Manhole Sections

ASTM C 564 (2003) Rubber Gaskets for Cast Iron Soil Pipe and Fittings

ASTM C 76 (2003) Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe

ASTM C 923 (2002) Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes and Laterals

ASTM C 924 (2002) Testing Concrete Pipe Sewer Lines by Low-Pressure Air Test Method

ASTM D 1557 (2002) Laboratory Compaction Characteristics of Soil Using Modified

	Effort (56,000 ft-lbf/cu. ft. (2,700 kN-m/cu.m.))
ASTM D 2167	(1994; R 2001) Density and Unit Weight of Soil in Place by the Rubber Balloon Method
ASTM D 2922	(2001) Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
ASTM D 3017	(2001) Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth)

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 shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Placing Pipe

Printed copies of the manufacturer's recommendations for installation procedures of the material being placed, prior to installation.

SD-07 Certificates

Pipeline Testing 1.3 DELIVERY, STORAGE, AND HANDLING

1.3.1 Delivery and Storage

Materials delivered to site shall be inspected for damage, unloaded, and stored with a minimum of handling. Materials shall not be stored directly on the ground. The inside of pipes and fittings shall be kept free of dirt and debris. The Contractor shall have a copy of the manufacturer's instructions available at the construction site at all times and shall follow these instructions unless directed otherwise by the Contracting Officer.

1.3.2 Handling

Materials shall be handled in a manner that ensures delivery to the trench in sound, undamaged condition. Pipe shall be carried to the trench, not dragged.

PART 2 PRODUCTS

2.1 PIPE FOR CULVERTS AND STORM DRAINS

Pipe for culverts and storm drains shall be of the sizes indicated and shall conform to the requirements specified.

2.1.1 Concrete Pipe

ASTM C 76, Class III.

2.1.2 Cast-Iron Soil Piping

Cast-Iron Soil Pipe shall conform to ASTM A 74, service-weight; gaskets shall be compression-type rubber conforming to ASTM C 564.

2.2 MISCELLANEOUS MATERIALS

2.2.1 Concrete

Unless otherwise specified, concrete and reinforced concrete shall conform to the requirements for 3000 psi concrete under Section 03300A CAST-IN-PLACE STRUCTURAL CONCRETE. The concrete mixture shall have air content by volume of concrete, based on measurements made immediately after discharge from the mixer, of 5 to 7 percent when maximum size of coarse aggregate exceeds 1-1/2 inches. Air content shall be determined in accordance with ASTM C 231. The concrete covering over steel reinforcing shall not be less than 1 inch thick for covers and not less than 1-1/2 inches thick for walls and flooring. Concrete covering deposited directly against the ground shall have a thickness of at least 3 inches between steel and ground.

2.2.2 Precast Reinforced Concrete Manholes

Precast reinforced concrete manholes shall conform to ASTM C 478. Joints between precast concrete risers and tops shall be made with flexible watertight, rubber-type gaskets meeting the requirements of paragraph JOINTS.

2.2.3 Joints

2.2.3.1 Flexible Watertight Joints

- a. Materials: Flexible watertight joints shall be made with plastic or rubber-type gaskets for concrete pipe. The design of joints and the physical requirements for plastic gaskets shall conform to AASHTO M 198, and rubber-type gaskets shall conform to ASTM C 443. Gaskets shall have not more than one factory-fabricated splice.

2.2.3.2 Ductile Iron Pipe

Couplings and fittings shall be as recommended by the pipe manufacturer.

2.3 RESILIENT CONNECTORS

Flexible, watertight connectors used for connecting pipe to manholes and inlets shall conform to ASTM C 923.

PART 3 EXECUTION

3.1 EXCAVATION FOR PIPE CULVERTS, STORM DRAINS, AND DRAINAGE STRUCTURES

Excavation of trenches, and for appurtenances and backfilling for culverts and storm drains, shall be in accordance with the applicable portions of Section 02331A LEVEE EMBANKMENT AND EARTHWORK and the requirements specified below.

3.1.1 Trenching

The width of trenches at any point below the top of the pipe shall be not greater than the outside diameter of the pipe plus 8 inches to permit satisfactory jointing and thorough tamping of the bedding material under and around the pipe. Contractor shall not overexcavate. Where trench widths are exceeded, redesign with a resultant increase in cost of stronger pipe or special installation procedures will be necessary. Cost of this redesign and increased cost of pipe or installation shall be borne by the Contractor without additional cost to the Government.

3.2 BEDDING

The bedding surface for the pipe shall provide a firm foundation of uniform density throughout the entire length of the pipe.

3.2.1 Concrete Pipe Requirements

Concrete pipe shall be bedded in a soil foundation accurately shaped and rounded to conform to the lowest one-fourth of the outside portion of circular pipe or to the lower curved portion of pipe arch for the entire length of the pipe. When necessary, the bedding shall be tamped. Bell holes and depressions for joints shall be not more than the length, depth, and width required for properly making the particular type of joint.

3.2.2 Ductile Iron and Cast-Iron Pipe

Bedding for ductile iron and cast-iron pipe shall be as shown on the drawings.

3.3 PLACING PIPE

Each pipe shall be thoroughly examined before being laid; defective or damaged pipe shall not be used. Pipelines shall be laid to the grades and alignment indicated. Proper facilities shall be provided for lowering sections of pipe into trenches. Pipe shall not be laid in water, and pipe shall not be laid when trench conditions or weather are unsuitable for such work. Diversion of drainage or dewatering of trenches during construction shall be provided as necessary.

3.3.1 Concrete, Ductile Iron Pipe

Laying shall proceed upgrade with spigot ends of bell-and-spigot pipe and tongue ends of tongue-and-groove pipe pointing in the direction of the flow.

3.4 JOINTING

3.4.1 Concrete Pipe

3.4.1.1 Flexible Watertight Joints

Gaskets and jointing materials shall be as recommended by the particular manufacturer in regard to use of lubricants, cements, adhesives, and other special installation requirements. Surfaces to receive lubricants, cements, or adhesives shall be clean and dry. Gaskets and jointing materials shall be affixed to the pipe not more than 24 hours prior to the installation of the pipe, and shall be protected from the sun, blowing dust, and other deleterious agents at all times. Gaskets and jointing materials shall be inspected before installing the pipe; any loose or improperly affixed gaskets and jointing materials shall be removed and replaced. The pipe shall be aligned with the previously installed pipe, and the joint pushed home. If, while the joint is being made the gasket becomes visibly dislocated the pipe shall be removed and the joint remade.

3.5 DRAINAGE STRUCTURES

3.5.1 Manholes and Inlets

Construction shall be of reinforced concrete or precast reinforced concrete; complete with frames and covers or gratings. Pipe connections to concrete manholes and inlets shall be made with flexible, watertight connectors.

3.5.2 Walls and Headwalls

Construction shall be as indicated by drawings.

3.6 BACKFILLING

3.6.1 Backfilling Pipe in Trenches

After the pipe has been properly bedded, selected material from excavation or borrow, at a moisture content that will facilitate compaction, shall be placed along both sides of pipe in layers not exceeding 6 inches in compacted depth. The backfill shall be brought up evenly on both sides of pipe for the full length of pipe. The fill shall be thoroughly compacted under the haunches of the pipe. Each layer shall be thoroughly compacted with mechanical tampers or rammers. This method of filling and compacting shall continue until the fill has reached an elevation of at least 12 inches above the top of the pipe. The remainder of the trench shall be backfilled and compacted by spreading and rolling or compacted by mechanical rammers or tampers in layers not exceeding 6 inches. Tests for density shall be made as necessary to ensure conformance to the compaction requirements specified below. Where it is necessary, in the opinion of the Contracting Officer, that sheeting or portions of bracing used be left in place, the contract will be adjusted accordingly. Untreated sheeting shall not be left in place beneath structures or pavements.

3.6.2 Backfilling Pipe in Fill Sections

For pipe placed in fill sections, backfill material and the placement and compaction procedures shall be as specified below. The fill material shall be uniformly spread in layers longitudinally on both sides of the pipe, not exceeding 6 inches in compacted depth, and shall be compacted by rolling

parallel with pipe or by mechanical tamping or ramming. Prior to commencing normal filling operations, the crown width of the fill at a height of 12 inches above the top of the pipe shall extend a distance of not less than twice the outside pipe diameter on each side of the pipe or 12 feet, whichever is less. After the backfill has reached at least 12 inches above the top of the pipe, the remainder of the fill shall be placed and thoroughly compacted in layers not exceeding 6 inches.

3.6.3 Movement of Construction Machinery

When compacting by rolling or operating heavy equipment parallel with the pipe, displacement of or injury to the pipe shall be avoided. Movement of construction machinery over a culvert or storm drain at any stage of construction shall be at the Contractor's risk. Any damaged pipe shall be repaired or replaced.

3.6.4 Compaction

3.6.4.1 General Requirements

Cohesionless materials include gravels, gravel-sand mixtures, sands, and gravelly sands. Cohesive materials include clayey and silty gravels, gravel-silt mixtures, clayey and silty sands, sand-clay mixtures, clays, silts, and very fine sands. When results of compaction tests for moisture-density relations are recorded on graphs, cohesionless soils will show straight lines or reverse-shaped moisture-density curves, and cohesive soils will show normal moisture-density curves.

3.6.4.2 Minimum Density

Backfill over and around the pipe and backfill around and adjacent to drainage structures shall be compacted at the approved moisture content to the following applicable minimum density, which will be determined as specified below.

- a. Under roads the density shall be not less than 90 percent of maximum density for cohesive material and 95 percent of maximum density for cohesionless material, up to the elevation where requirements for pavement subgrade materials and compaction shall control.

3.6.5 Determination of Density

Testing shall be the responsibility of the Contractor and performed at no additional cost to the Government. Testing shall be performed by an approved commercial testing laboratory or by the Contractor subject to approval. Tests shall be performed in sufficient number to ensure that specified density is being obtained. Laboratory tests for moisture-density relations shall be made in accordance with ASTM D 1557 except that mechanical tampers may be used provided the results are correlated with those obtained with the specified hand tamper. Field density tests shall be determined in accordance with ASTM D 2167 or ASTM D 2922. When ASTM D 2922 is used, the calibration curves shall be checked and adjusted, if necessary, using the sand cone method as described in paragraph Calibration

of the referenced publications. ASTM D 2922 results in a wet unit weight of soil and when using this method ASTM D 3017 shall be used to determine the moisture content of the soil. The calibration curves furnished with the moisture gauges shall be checked along with density calibration checks as described in ASTM D 3017 or ASTM D 2922. Test results shall be furnished the Contracting Officer. The calibration checks of both the density and moisture gauges shall be made at the beginning of a job on each different type of material encountered and at intervals as directed.

3.7 PIPELINE TESTING

3.7.1 Leakage Tests

Lines shall be tested for leakage by low pressure air or water testing or exfiltration tests, as appropriate. Low pressure air testing for concrete pipes shall conform to ASTM C 924. Testing of individual joints for leakage by low pressure air or water shall conform to ASTM C 1103. Prior to exfiltration tests, the trench shall be backfilled up to at least the lower half of the pipe. If required, sufficient additional backfill shall be placed to prevent pipe movement during testing, leaving the joints uncovered to permit inspection. Visible leaks encountered shall be corrected regardless of leakage test results. When the water table is 2 feet or more above the top of the pipe at the upper end of the pipeline section to be tested, infiltration shall be measured using a suitable weir or other device acceptable to the Contracting Officer. An exfiltration test shall be made by filling the line to be tested with water so that a head of at least 2 feet is provided above both the water table and the top of the pipe at the upper end of the pipeline to be tested. The filled line shall be allowed to stand until the pipe has reached its maximum absorption, but not less than 4 hours. After absorption, the head shall be reestablished. The amount of water required to maintain this water level during a 2-hour test period shall be measured. Leakage as measured by the exfiltration test shall not exceed 0.2 gallons per inch in diameter per 100 feet of pipeline per hour. When leakage exceeds the maximum amount specified, satisfactory correction shall be made and retesting accomplished.

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SECTION 02731A

LEVEE SURFACING

01/98

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.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 117	(1995) Materials Finer Than 75 micrometer (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C 131	(1996) Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C 136	(1996a) Sieve Analysis of Fine and Coarse Aggregates
ASTM D 75	(1987; R 1997) Sampling Aggregates
ASTM D 422	(1963; R 1998) Particle-Size Analysis of Soils
ASTM D 3740	(1999c) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
ASTM E 11	(1995) Wire-Cloth Sieves for Testing Purposes

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 shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-06 Test Reports

Sampling and Testing; G-AO

1.3 SAMPLING AND TESTING

Sampling and testing shall be the responsibility of the Contractor. Sampling and testing shall be performed by an approved commercial testing laboratory or by the Contractor, subject to approval. If the Contractor elects to establish its own testing facilities, approval of such facilities will be based on compliance with ASTM D 3740. No work requiring testing will be permitted until the Contractor's facilities have been inspected and approved.

1.3.1 Sampling

Sampling for material gradation shall be taken in conformance with ASTM D 75. When deemed necessary, the sampling will be observed by the Contracting Officer.

1.3.2 Testing

1.3.2.1 Gradation

Aggregate gradation shall be made in conformance with ASTM C 117, ASTM C 136, and ASTM D 422. Sieves shall conform to ASTM E 11.

1.3.3 Approval of Materials

The source of the material to be used for producing aggregates shall be selected 30 days prior to the time the material will be required in the work. Approval of sources not already approved by the Corps of Engineers will be based on an inspection by the Contracting Officer. Tentative approval of materials will be based on appropriate test results on the aggregate source. Final approval of the materials will be based on tests for gradation.

1.4 WEATHER LIMITATIONS

Levee surfacing shall not be constructed when the ambient temperatures is below 35 degrees F and on subgrades that are frozen or contain frost. It shall be the responsibility of the Contractor to protect, by approved method or methods, all areas of surfacing that have not been accepted by the Contracting Officer. Surfaces damaged by freeze, rainfall, or other weather conditions shall be brought to a satisfactory condition by the Contractor.

PART 2 PRODUCTS

2.1 AGGREGATES

Aggregates shall consist of clean, sound, durable particles of crushed gravel, crushed stone, or other approved materials processed and blended or naturally combined. Aggregates shall be free from lumps and balls of clay, organic matter, objectionable coatings, and other foreign materials. The Contractor shall be responsible for obtaining materials that meet the specification and can be used to meet the grade and smoothness requirements specified herein after all compaction and proof rolling operations have

been completed.

2.1.1 Coarse Aggregates

The material retained on the No. 4 sieve shall be known as coarse aggregate. Coarse aggregates shall be reasonably uniform in density and quality. The coarse aggregate shall have a percentage of wear not to exceed 50 percent after 500 revolutions as determined by ASTM C 131. The amount of flat and/or elongated particles shall not exceed 20 percent. A flat particle is one having a ratio of width to thickness greater than three; an elongated particle is one having a ratio of length to width greater than three. When the coarse aggregate is supplied from more than one source, aggregate from each source shall meet the requirements set forth herein.

2.1.2 Fine Aggregates

The material passing the No. 4 sieve shall be known as fine aggregate. Fine aggregate shall consist of screenings, sand, soil, or other finely divided mineral matter that is processed or naturally combined with the coarse aggregate.

2.1.3 Gradation Requirements

Levee surfacing shall conform to the gradation shown below in Table 1. The gradation requirements specified in TABLE I shall apply to the completed aggregate surface. It shall be the responsibility of the Contractor to obtain materials that will meet the gradation requirements after mixing, placing, compacting, and other operations. TABLE I shows permissible gradings for granular material used in levee surfacing Sieves shall conform to ASTM E 11.

TABLE I. GRADATION FOR LEVEE AGGREGATE SURFACE COURSES

<u>Levee Surfacing</u> Sieve Designation	Percentage Passing
1 in.	100
3/4 in.	50-85
No. 4	35-65
No. 8	15-30
No. 200	8-15

PART 3 EXECUTION

3.1 OPERATION OF AGGREGATE SOURCES

Clearing, stripping, and excavating shall be the responsibility of the Contractor. The aggregate sources shall be operated to produce the quantity and quality of materials meeting these specification requirements in the specified time limit. Upon completion of the work, the levee surfacing shall be conditioned to drain readily and be left in a satisfactory condition.

3.2 STOCKPILING MATERIALS

Prior to stockpiling the material, the storage sites shall be cleared and leveled by the Contractor. All materials, including approved material available from excavation and grading, shall be stockpiled in the manner and at the locations designated. Aggregates shall be stockpiled in such a manner that will prevent segregation.

3.3 PREPARATION OF UNDERLYING LEVEE SUBGRADE

The levee subgrade, including shoulders, shall be cleaned of all foreign substances. At the time of levee surfacing material construction, the levee subgrade shall contain no frozen material. Ruts or soft yielding spots in the subgrade areas having inadequate compaction and deviations of the surface from the requirements set forth herein shall be corrected by loosening and removing soft or unsatisfactory material and by adding approved material, reshaping to line and grade and recompacting to density requirements specified in Section 02331A titled: LEVEE EMBANKMENT AND EARTHWORK. The completed subgrade shall not be disturbed by traffic or other operations and shall be maintained by the Contractor in a satisfactory condition until the levee surfacing is placed.

3.4 GRADE CONTROL

During construction, the lines and grades of the levee embankment and levee surfacing including crown and cross slope indicated for the levee embankment and levee surfacing shall be maintained by the Contractor.

3.5 LAYER THICKNESS

The aggregate material shall be placed on the the levee crest subgrade in a 4 inch layer of uniform thickness prior to compaction.

3.6 COMPACTION

The levee surfacing shall be compacted with 1 pass of an approved compaction equipment. In locations not accessible to the rollers, the mixture shall be compacted with mechanical tampers.

3.7 COMPACTION EQUIPMENT

Compaction Equipment consist of a heavy rubber-tired roller having four tires abreast with each tire loaded to 30,000 pounds and tires inflated to 150 psi.

3.8 THICKNESS CONTROL

The thickness of the levee surfacing shall be within 1/2 inch, plus or minus, of the 4" thickness indicated on plans. When the measured thickness of the levee surfacing course is more than 1/2 inch deficient in thickness, the Contractor, at no additional expense to the Government, shall correct such areas by adding surfacing course material and recompacting with 1 pass of the approved compaction equipment. Where the measured thickness of the aggregate surface course is more than 1/2 inch)

thicker than that indicated, it shall be considered as conforming with the specified thickness requirements plus 1/2 inch.

3.9 MAINTENANCE

The levee surfacing shall be maintained in a condition that will meet all specification requirements until accepted.

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SECTION 02821A

FENCING

04/04

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 A 392	(2003) Zinc-Coated Steel Chain-Link Fence Fabric
ASTM A 491	(2003) Aluminum-Coated Steel Chain-Link Fence Fabric
ASTM A 780	(2001) Repair of Damaged and Uncoated Areas of Hot-Dipped Galvanized Coatings
ASTM A 824	(2001) Metallic-Coated Steel Marcellled Tension Wire for Use With Chain Link Fence
ASTM C 94/C 94M	(2003a) Ready-Mixed Concrete
ASTM F 1043	(2000) Strength and Protective Coatings on Metal Industrial Chain-Link Fence Framework
ASTM F 1083	(1997; R 2003) Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-07 Certificates

Chain Link Fence

Statement, signed by an official authorized to certify on behalf

of the manufacturer, attesting that the chain link fence and component materials meet the specified requirements.

PART 2 PRODUCTS

2.1 FENCE FABRIC

Fence fabric shall conform to the following:

2.1.1 Chain Link Fence Fabric

ASTM A 392, Class 1, zinc-coated steel wire with minimum coating weight of 1.2 ounces of zinc per square foot of coated surface, or ASTM A 491, Type I, aluminum-coated steel wire. Fabric shall be fabricated of 9 gauge wire woven in 2 inch mesh. Fabric height shall be 6 feet. Fabric shall be twisted and barbed on the top selvage and knuckled on the bottom selvage.

2.2 POSTS

2.2.1 Metal Posts for Chain Link Fence

ASTM F 1083, zinc-coated. Group IA, with external coating Type A steel pipe. Group IC steel pipe, zinc-coated with external coating Type A or Type B and Group II, roll-formed steel sections, shall meet the strength and coating requirements of ASTM F 1043. Sizes shall be as shown on the drawings. Line posts and terminal (corner, gate, and pull) posts selected shall be of the same designation throughout the fence.

2.3 WIRE

2.3.1 Tension Wire

Tension wire shall be Type I or Type II, Class 4 coating, in accordance with ASTM A 824.

2.4 CONCRETE

ASTM C 94/C 94M, using 3/4 inch maximum size aggregate, and having minimum compressive strength of 3000 psi at 28 days. Grout shall consist of one part portland cement to three parts clean, well-graded sand and the minimum amount of water to produce a workable mix.

PART 3 EXECUTION

3.1 INSTALLATION

Fence shall be installed to match the existing lines and grades. Line posts shall be spaced equidistant at intervals not exceeding 10 feet. Terminal (corner, gate, and pull) posts shall be set at abrupt changes in vertical and horizontal alignment. Fabric shall be continuous between terminal posts; however, runs between terminal posts shall not exceed 500 feet. Any damage to galvanized surfaces, including welding, shall be repaired with paint containing zinc dust in accordance with ASTM A 780.

3.2 EXCAVATION

Post holes shall be cleared of loose material. Waste material shall be spread where directed. The ground surface irregularities along the fence line shall be eliminated to the extent necessary to maintain a 2 inch clearance between the bottom of the fabric and finish grade.

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PART 1 GENERAL

Contractor shall prepare ground surfaces, fertilize, seed and mulch all disturbed ground surfaces not indicated to be surfaced otherwise. Contractor shall take special precautions to ensure weed plants are controlled during all phases of construction as required in paragraph 3.2 SITE PREPARATION.

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.

AGRICULTURAL MARKETING SERVICE (AMS)

AMS-01 (Aug 95) Federal Seed Act Regulations Part 201

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 5268 (1992; R 1996) Topsoil Used for Landscaping Purposes

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 shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Equipment;

A listing of equipment to be used for the seeding operation.

Delivery;

Delivery schedule.

Finished Grade and Topsoil;

Finished grade status.

SD-03 Product Data

Equipment;
Surface Erosion Control Material;
Pesticides; G-AO.

Manufacturer's literature including physical characteristics, application and installation instructions for equipment, surface erosion control material, and pesticides.

SD-04 Samples

Soil Amendments;

A 10 pound sample.

Mulch;

A 10 pound sample.

SD-06 Test Reports

Equipment Calibration;

Certification of calibration tests conducted on the equipment used in the seeding operation.

SD-07 Certificates

Seed; G-AO.
Fertilizer;
Mulch;
Pesticide; G-AO.

Prior to purchasing of seed a complete listing of seed varieties (common name and botanical name) available for use. Prior to the delivery of materials, certificates of compliance attesting that materials meet the specified requirements. Certified copies of the material certificates shall include the following:

- a. Seed. Classification, botanical name, common name, percent pure live seed, minimum percent germination and hard seed, maximum percent weed seed content, and date tested. Signed statement certifying that seed mixtures have been tested within the last 6 months prior to the date of delivery for seed type, and weed content.
- c. Fertilizer. Chemical analysis and composition percent.
- d. Mulch. Composition and source.
- e. Pesticide. EPA registration number and registered uses.

SD-11 Closeout Submittals

Quantity Check;

Bag count or bulk weight measurements of material used compared with area covered to determine the application rate and quantity installed.

Seed Establishment Period;

Calendar time period for the seed establishment period. When there is more than one seed establishment period, the boundaries of the seeded area covered for each period shall be described.

Maintenance Record;

Maintenance work performed, area repaired or reinstalled, diagnosis for unsatisfactory stand of grass plants.

Application of Pesticide; G-AO.

Pesticide treatment plan with sequence of treatment work with dates and times. The pesticide trade name, EPA registration number, chemical composition, formulation, concentration of original and diluted material, application rate of active ingredients, method of application, area treated, amount applied; and the name and state license number of the state certified applicator shall be included.

1.3 DELIVERY, INSPECTION, STORAGE, AND HANDLING

1.3.1 Delivery

A delivery schedule shall be provided at least 10 calendar days prior to the first day of delivery.

1.3.1.1 Topsoil

No existing topsoil exists on the site. Contractor shall fertilize the existing soil in preparation for seeding.

1.3.1.2 Soil Amendments

Soil amendments shall be delivered to the site in the original, unopened containers bearing the manufacturer's chemical analysis. In lieu of containers, soil amendments may be furnished in bulk. A chemical analysis shall be provided for bulk deliveries.

1.3.1.3 Pesticides

Pesticide material shall be delivered to the site in the original, unopened containers bearing legible labels indicating the EPA registration number and the manufacturer's registered uses.

1.3.2 Inspection

Seed shall be inspected upon arrival at the job site for conformity to species and quality. Seed that is wet, moldy, or bears a test date six months or older, shall be rejected. Other materials shall be inspected for compliance with specified requirements. The following shall be rejected:

open soil amendment containers or wet soil amendments; soil for seeding purposes that contains slag, cinders, stones, lumps of soil, sticks, roots, trash or other material over a minimum 2 inches diameter; and soil that contains viable plants and plant parts. Unacceptable materials shall be removed from the job site.

1.3.3 Storage

Materials shall be stored in designated areas. Seed and fertilizer shall be stored in cool, dry locations away from contaminants. Pesticides shall be stored according to manufacturer's instructions and not with seeding operation materials.

1.3.4 Handling

Except for bulk deliveries, materials shall not be dropped or dumped from vehicles.

PART 2 PRODUCTS

2.1 SEED

2.1.1 Seed Classification

State-certified seed of the latest season's crop shall be provided in original sealed packages bearing the producer's guaranteed analysis for percentages of mixture, purity, germination, hard seed, weed seed content, and inert material. Labels shall be in conformance with AMS-01 and applicable state seed laws. Seed mixtures shall be free from any State listed noxious weeds including but not limited to Russian or Canadian Thistle, European Bindweed, Johnson Grass, and Leafy Spurge.

2.1.2 Permanent Seed Species and Mixtures

Permanent seed species and mixtures shall be proportioned by weight: Computation of quantity of seed required is based on the percent of purity and percent of germination. Pounds of pure live seed (PLS) = pounds of seed x germination x purity.

Seed Mixture A (All areas other than the borrow area and Mixture B area)

Seed Variety	Pounds PLS/Acre
<u>Mowed areas</u>	
Blue Grama	3.0
Little bluestem	2.0
Canada wildrye	3.0
Common oats	10.0
Western Wheat	2.0
June grass	0.5
Slender wheat	2.0
Sideoats Grama	<u>2.0</u>
Total	24.5

Seed Mixture B (All areas other than the borrow area and Mixture A area)

<u>Unmowed areas (Native mix)</u>	<u>Pounds PLS/Acre</u>
Big bluestem	3.0
Little bluestem	2.0
Canada wildrye	3.0
Western Wheat	2.0
Indiangrass	3.0
Prairie cordgrass	1.0
Virginia wildrye	3.0
Slender Wheat	2.0
Common Oats	<u>10.0</u>
	29.0

2.1.3 Temporary Seed Grass Species

Temporary seed species for seeding finished graded surfaces outside of allowable permanent grass seeding dates and for surface erosion control or overseeding shall be Common Oats (Certified) seeded at a rate 96 pounds per acre.

2.1.4 Quality

Weed seed shall be a maximum 1 percent by weight of the total mixture.

2.1.5 Seed Mixing

The mixing of seed may be done by the seed supplier prior to delivery.

2.1.6 Substitutions

Substitutions will not be allowed without written request and approval from the Contracting Officer.

2.2 TOPSOIL

Topsoil shall be as defined in ASTM D 5268 and as specified in Section 02331A LEVEE EMBANKMENT AND EARTHWORK. When available, the topsoil shall be the existing surface soil stripped and stockpiled onsite.

2.3 SOIL AMENDMENTS

Soil amendments shall consist of fertilizer meeting the following requirements.

2.3.1 Fertilizer

The fertilizer shall supply no less than 200 pounds per acre of Phosphorous and 100 pounds per acre of Potassium.

2.4 MULCH

Mulch shall be free from weeds, mold, and other deleterious materials. Mulch materials shall be native to the region.

2.4.1 Prairie Hay

Hay shall be native prairie hay from alfalfa or clover furnished in an air-dry condition suitable for placing with commercial mulch-blowing equipment. Hay shall be free of noxious weeds, brome grass, mold or other objectionable material.

2.5 WATER

Water shall be the responsibility of the Contractor, unless otherwise noted. Water shall not contain elements toxic to plant life.

2.6 PESTICIDE

Pesticide shall be insecticide, herbicide, fungicide, nematocide, rodenticide or miticide. For the purpose of this specification, a soil fumigant shall have the same requirements as a pesticide. The pesticide material shall be EPA registered and approved.

2.7 SURFACE EROSION CONTROL MATERIAL

Surface erosion control material shall conform to the following:

2.7.1 Surface Erosion Control Blanket

Blanket shall be machine produced mat of knitted curled wood excelsior covered on both sides with a degradable plastic mesh or interwoven degradable thread. Blanket shall weight approximately 1 pound per square yard. Blanket shall be made by American Excelsior or approved equal.

2.7.2 Erosion Control Material Anchors

Erosion control anchors shall be as recommended by the manufacturer.

PART 3 EXECUTION

3.1 INSTALLING SEED TIME AND CONDITIONS

3.1.1 Seeding Time

Permanent seed mix installed from April 1 to May 30 for spring establishment; and from August 1 September 15 for fall establishment. All finished graded surfaces shall be seeded with temporary seed grass outside of the dates indicated above if the surfaces are to remain unseeded in permanent grasses for more than 30 days.

3.1.2 Seeding Operations

Seeding operations shall be performed only during periods when beneficial results can be obtained. When drought, excessive moisture, or other

unsatisfactory conditions prevail, the work shall be stopped when directed.

When special conditions warrant a variance to the seeding operations, proposed alternate times shall be submitted for approval.

3.1.3 Equipment Calibration

Immediately prior to the commencement of seeding operations, calibration tests shall be conducted on the equipment to be used. These tests shall confirm that the equipment is operating within the manufacturer's specifications and will meet the specified criteria. The equipment shall be calibrated a minimum of once every day during the operation. The calibration test results shall be provided within 1 week of testing.

3.2 SITE PREPARATION

Contractor shall make special efforts to control weed infestation on all portions of the project during construction. Weeds shall be either mowed or controlled with pesticides during the entire extent of the project. Weeds shall not be allowed to grow to heights of more than 12" over any portions of the project and shall not be allowed to grow on more than 5% of the area on the project. All soil areas which will remain undisturbed for more than 30 days shall be seeded with temporary seed grass as specified. Temporary seed grass shall not be allowed to seed out and shall be mowed to remove seed heads prior to this stage.

3.2.1 Finished Grade and Topsoil

The Contractor shall verify that finished grades are as indicated on drawings, and smooth grading, and compaction requirements have been completed prior to the commencement of the seeding operation. Prior to seeding operations the soil shall be tilled to a depth of no less than 6 inches to allow root penetration in all areas that have been compacted by construction equipment.

3.2.2 Application of Soil Amendments

3.2.2.1 Applying Fertilizer

Fertilizer shall be incorporated into the soil to a maximum 4 inch depth or may be incorporated as part of the tillage operation.

3.2.3 Tillage

Soil on slopes up to a maximum 3-horizontal-to-1-vertical shall be tilled to a minimum 6 inch depth. Rototillers shall be used where soil conditions and length of slope permit. Drainage patterns shall be maintained as indicated on drawings. Areas compacted by construction operations shall be completely pulverized by tillage. The fertilizer may be applied during this procedure.

3.2.4 Prepared Surface

3.2.4.1 Preparation

The prepared surface shall be a maximum 1 inch below the adjoining grade of any surfaced area. New surfaces shall be blended to existing areas. The prepared surface shall be completed with a light raking to remove debris.

3.2.4.2 Field Area Debris

Debris and stones over a minimum 2 inch in any dimension shall be removed from the surface.

3.2.4.3 Protection

Areas with the prepared surface shall be protected from compaction or damage by vehicular or pedestrian traffic and surface erosion.

3.3 INSTALLATION

All grade areas not indicated to be surfaced with paving, or other means shall be seeded as specified. Grass seeding shall occur as specified herein as soon as the soil has been prepared and the environmental conditions are favorable for installation. Prior to installing seed, any previously prepared surface compacted or damaged shall be reworked to meet the requirements of paragraph SITE PREPARATION. Seeding operations shall not take place when the wind velocity will prevent uniform seed distribution.

3.3.1 Installing Seed

All areas to be seeded shall be drill seeded except for those areas which are only accessible to broadcast seeding. Seeding procedure shall ensure even coverage. Drill seeded areas shall be seeded at the rates required under paragraph Permanent Seed Species and Mixtures

3.3.1.1 Drill Seeding

Seed shall be uniformly drilled to a maximum 1/2 inch depth using seeders appropriate for the type of seeds spread. Row markers shall be used with the drill seeder. Seed shall be uniformly sown in two passes, each at right angles to the other. Final pass shall be parallel to the finished contours.

3.3.1.2 Broadcast Seeding

Seed shall be uniformly broadcast using broadcast seeders. Seed shall be broadcast at twice the rate specified for drill seeding. Half the total rate of seed application shall be broadcast in one direction, with the remainder of the seed rate broadcast at 90 degrees from the first direction. Seed shall be covered a maximum 1/2 inch depth by light raking or other approved device.

3.3.1.3 Rolling

The entire area shall be firmed with a roller not exceeding 90 pounds per foot roller width. Slopes over a maximum 3-horizontal-to-1 vertical shall not be rolled. Areas seeded with seed drills equipped with rollers shall not be rolled.

3.3.2 Mulching

Mulching shall be completed within 24 hours of having the surfaces seeded.

3.3.2.1 Mulching

Prairie hay mulch shall be spread uniformly, in a continuous blanket, at the rate of 2 tons per acre. Mulch shall be spread by hand, blower-type mulch spreader or other approved method. Mulching shall be started on the windward side of relatively flat areas or on the upper part of a steep slope and continued uniformly until the area is covered. The mulch shall not be bunched. All seeded areas shall be mulched on the same day as the seeding. Hay mulching is not required in areas to receive erosion control blankets. Immediately following spreading, the mulch shall be anchored to the soil by a V-type-wheel land packer, a scalloped-disk land packer designed to force mulch into the soil surface a minimum of 3 inches, or other suitable equipment.

3.3.3 Watering Seed

Watering shall not be required.

3.4 SURFACE EROSION CONTROL

3.4.1 Surface Erosion Control Material

Surface erosion control material shall be installed within 24 hours of seeding, in accordance with manufacturer's instructions. Soil erosion control blankets shall be placed on all seeded surfaces shown on the plans with slopes greater than 3 horizontal to 1 vertical or steeper, and all swales concentrating water leading to culverts, inlets and surfaces around culvert entrances and exits that are not indicated to have riprap or turf reinforcement mat. Placement of the material shall be accomplished without damage to installed material or without deviation to finished grade.

3.4.2 Temporary Seeding

When directed during contract delays affecting the seeding operation, when a quick cover is required to prevent surface erosion, or when areas to be permanently seeded are to remain unseeded for at least 30 days the areas designated shall be seeded in accordance with temporary seed species listed under paragraph 2.1.3. Temporary Seed Species.

3.4.2.1 Soil Amendments

When soil amendments have not been applied to the area, the quantity of 1/2 of the required soil amendments shall be applied and the area tilled in accordance with paragraph SITE PREPARATION.

3.4.2.2 Remaining Soil Amendments

The remaining soil amendments shall be applied in accordance with the paragraph Tillage when the surface is prepared for installing seed.

3.5 QUANTITY CHECK

For materials provided in bags, the empty bags shall be retained for recording the amount used. For materials provided in bulk, the weight certificates shall be retained as a record of the amount used. The amount of material used shall be compared with the total area covered to determine the rate of application used. Differences between the quantity applied and the quantity specified shall be adjusted as directed.

3.6 APPLICATION OF PESTICIDE

When application of a pesticide becomes necessary to remove a pest or disease, when weeds comprise more than 5% of the seeded area, a pesticide treatment plan shall be submitted and coordinated with the project pest management program.

3.6.1 Technical Representative

The certified installation pest management coordinator shall be the technical representative, and shall be present at all meetings concerning treatment measures for pest or disease control. They may be present during treatment application.

3.6.2 Application

A state certified applicator shall apply required pesticides in accordance with EPA label restrictions and recommendations. Clothing and personal protective equipment shall be used as specified on the pesticide label. A closed system is recommended as it prevents the pesticide from coming into contact with the applicator or other persons. Water for formulating shall only come from designated locations. Filling hoses shall be fitted with a backflow preventer meeting local plumbing codes or standards. Overflow shall be prevented during the filling operation. Prior to each day of use, the equipment used for applying pesticide shall be inspected for leaks, clogging, wear, or damage. Any repairs are to be performed immediately. A pesticide plan shall be submitted.

3.7 RESTORATION AND CLEAN UP

3.7.1 Restoration

Existing turf areas, pavements, and facilities that have been damaged from the seeding operation shall be restored to original condition at Contractor's expense.

3.7.2 Clean Up

Excess and waste material shall be removed from the seeded areas and shall be disposed offsite. Adjacent paved areas shall be cleaned.

3.8 PROTECTION OF INSTALLED AREAS

Immediately upon completion of the seeding operation in an area, the area

shall be protected against traffic or other use by erecting barricades and providing signage as required, or as directed.

3.9 SEED ESTABLISHMENT PERIOD

3.9.1 Commencement

The seed establishment period to obtain a healthy stand of grass plants shall end 4 months after the last day of the seeding operation. Written calendar time period shall be furnished for the seed establishment period. When there is more than 1 seed establishment period, the boundaries of the seeded area covered for each period shall be described. The seed establishment period shall be modified for inclement weather, shut down periods, or for separate completion dates of areas.

3.9.2 Satisfactory Stand of Grass Plants

Grass plants shall be evaluated for species and health when the grass plants are a minimum 6 inches high but no less than 30 days after finish of the seeding operation.

3.9.2.1 Field Seeded Areas

A satisfactory stand of grass plants from the seeding operation shall be defined as consisting of 100 grass plants per square foot. Bare spots shall be a maximum 6 inches square. Bare spots shall be a maximum 5 percent of the total seeded area for any one acre of seeded land.

3.9.3 Maintenance During Establishment Period

Maintenance of the seeded areas shall include mowing, eradicating weeds, insects and diseases; protecting embankments and ditches from surface erosion; maintaining erosion control materials and mulch; protecting installed areas from traffic.

3.9.3.1 Mowing and Weed Control

Maintain seeded areas immediately after placement until grass is well established and exhibits a vigorous growing condition for the length of the maintenance period. Maintenance shall consist of mowing, weeding, erosion repair, and reseeding of bare spots and remulching as required to achieve a vigorous growing condition. Mowing is an integral portion of the establishment of seeded areas. Of particular importance is the control of weeds (including broadleaf weeds, grasses other than those seeded, vines etc.) during the first year. Grass shall be mown to a minimum height of 8" when the height of the grass or the weeds obtain a height of no more than 12". Contractor shall mow all seeded areas a minimum of two times to control weeds during the maintenance period.

3.9.3.2 Pesticide Treatment

Treatment for disease or pest shall be in accordance with paragraph APPLICATION OF PESTICIDE. Concentrations of weeds shall be sprayed and eliminated with herbicides within 14 days of notification from the

Contractin Officer.

3.9.3.3 Repair or Reinstall

Unsatisfactory stand of grass plants and/or mulch shall be repaired or reinstalled, and eroded areas shall be repaired as soon as possible in accordance with paragraph SITE PREPARATION within 14 days of notification from the Contracting Officer. Method of reestablishment shall be either complete reseeding and mulching, overseeding, remulching as determined by the Contracting Officer.

3.9.3.4 Maintenance Record

A record of each site visit shall be furnished, describing the maintenance work performed; areas repaired or reinstalled; and diagnosis for unsatisfactory stand of grass plants.

3.10 TURF ESTABLISHMENT FOR DISTURBED AREAS (AREAS OUTSIDE OF REQUIRED GRADING AREAS)

Seeding requirements of disturbed areas should be in accordance with Section 01355 ENVIRONMENTAL PROTECTION, paragraph 3.13 POST CONSTRUCTION CLEANUP, and as follows. For turf areas that were originally native grass, the Contractor shall seed and mulch the disturbed area restoring the area to its original condition.

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SECTION 03101A

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-- End of Section Table of Contents --

SECTION 03101A

FORMWORK FOR CONCRETE
09/01

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.

ACI INTERNATIONAL (ACI)

ACI 347 (2001) Guide to Formwork for Concrete

U.S. DEPARTMENT OF COMMERCE (DOC)

PS1 (1995) Construction and Industrial Plywood
(APA V995)

1.2 DESIGN REQUIREMENTS

The design, engineering, and construction of the formwork shall be the responsibility of the Contractor. The formwork shall be designed for anticipated live and dead loads and shall comply with the tolerances specified in Section 03300 CAST-IN-PLACE STRUCTURAL CONCRETE, paragraph CONSTRUCTION TOLERANCES. The formwork shall be designed as a complete system with consideration given to the effects of cementitious materials and mixture additives such as fly ash, cement type, plasticizers, accelerators, retarders, air entrainment, and others. The adequacy of formwork design and construction shall be monitored prior to and during concrete placement as part of the Contractor's approved Quality Control Plan.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are [for Contractor Quality Control approval.][for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government.] The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Materials; G-AO

Manufacturer's recommendation on method and rate of application of form coating. .

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Forms and Form Liners

Forms and form liners shall be fabricated with facing materials that will produce a finish meeting the specified irregularities in formed surface requirements as defined in ACI 347. Forms and form liners shall be fabricated with facing materials as specified below.

2.1.1.1 Class "B" Finish

This class of finish shall apply to all surfaces except those specified to receive, Class D. The form facing material shall be composed of tongue-and-groove or shiplap lumber, plywood conforming to PS1, Grade B-B concrete form, tempered concrete form hard board or steel. Steel lining on wood sheathing will not be permitted.

2.1.1.2 Class "D" Finish

This class of finish shall apply to surfaces not placed against earth. The form facing may be of wood or steel.

2.1.2 Form Coating

Form coating shall be commercial formulation that will not bond with, stain, cause deterioration, or any other damage to concrete surfaces. The coating shall not impair subsequent treatment of concrete surfaces depending upon bond or adhesion nor impede the wetting of surfaces to be cured with water or curing compounds.

2.2 ACCESSORIES

Ties and other similar form accessories to be partially or wholly embedded in the concrete shall be of a commercially manufactured type. After the ends or end fasteners have been removed, the embedded portion of metal ties shall terminate not less than 2 inches from any concrete surface either exposed to view or exposed to water. Plastic snap ties may be used in locations where the surface will not be exposed to view. Form ties shall be constructed so that the ends or end fasteners can be removed without spalling the concrete.

PART 3 EXECUTION

3.1 INSTALLATION

3.1.1 Form Construction

Forms shall be constructed true to the structural design and required alignment. The form surface and joints shall be mortar tight and supported to achieve safe performance during construction, concrete placement, and form removal. The Contractor shall continuously monitor the alignment and

stability of the forms during all phases to assure the finished product will meet the required surface class [or classes] specified in paragraph FORMS AND FORM LINERS and tolerances specified in paragraph DESIGN REQUIREMENTS. Failure of any supporting surface either due to surface texture, deflection or form collapse shall be the responsibility of the Contractor as will the replacement or correction of unsatisfactory surfaces. When forms for continuous surfaces are placed in successive units, care shall be taken to fit the forms over the completed surface to obtain accurate alignment of the surface and to prevent leakage of mortar. Forms shall not be re-used if there is any evidence of defects which would impair the quality of the resulting concrete surface. All surfaces of used forms shall be cleaned of mortar and any other foreign material before reuse.

3.1.2 Chamfering

All exposed joints, edges and external corners shall be chamfered by molding placed in the forms unless the drawings specifically state that chamfering is to be omitted or as otherwise specified. Chamfered joints shall not be permitted where earth or rockfill is placed in contact with concrete surfaces. Chamfered joints shall be terminated twelve inches outside the limit of the earth or rockfill so that the end of the chamfers will be clearly visible.

3.1.3 Coating

Forms for exposed or painted surfaces shall be coated with form oil or a form-release agent before the form or reinforcement is placed in final position. The coating shall be used as recommended in the manufacturer's instructions. Forms for unexposed surfaces may be wet with water in lieu of coating immediately before placing concrete, except that, in cold weather when freezing temperatures are anticipated, coating shall be mandatory. Surplus coating on form surfaces and coating on reinforcing steel and construction joints shall be removed before placing concrete.

3.2 FORM REMOVAL

Forms shall not be removed without approval. The minimal time required for concrete to reach a strength adequate for removal of formwork without risking the safety of workers or the quality of the concrete depends on a number of factors including, but not limited to, ambient temperature, concrete lift heights, type and amount of concrete admixture, and type and amount of cementitious material in the concrete. It is the responsibility of the Contractor to consider all applicable factors and leave the forms in place until it is safe to remove them. In any case forms shall not be removed unless the minimum time requirements below are met, except as otherwise directed or specifically authorized. When conditions are such as to justify the requirement, forms will be required to remain in place for a longer period. All removal shall be accomplished in a manner which will prevent damage to the concrete and ensure the complete safety of the structure. Where forms support more than one element, the forms shall not be removed until the form removal criteria are met by all supported elements.

3.2.1 Formwork Not Supporting Weight of Concrete

Formwork for walls, columns, sides of beams, gravity structures, and other vertical type formwork not supporting the weight of concrete shall not be removed in less than 24 hours after concrete placement is completed.

3.2.2 Formwork Supporting Weight of Concrete

Formwork supporting weight of concrete and shoring shall not be removed until structural members have acquired sufficient strength to safely support their own weight and any construction or other superimposed loads to which the supported concrete may be subjected.

3.3 INSPECTION

Forms and embedded items shall be inspected in sufficient time prior to each concrete placement by the Contractor in order to certify to the Contracting Officer that they are ready to receive concrete. The results of each inspection shall be reported in writing.

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SECTION 03151A

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SECTION 03151A

EXPANSION, CONTRACTION AND CONSTRUCTION JOINTS IN CONCRETE FOR CIVIL WORKS
09/03

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 D 1751 (1999) Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)

ASTM D 1752 (1984; R 1996e1) Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction

U.S. ARMY CORPS OF ENGINEERS (USACE)

COE CRD-C 513 (1974) Specifications for Rubber Waterstops

COE CRD-C 572 (1974) Specifications for Polyvinylchloride Waterstops

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are [for Contractor Quality Control approval.][for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government.] The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Splicing Waterstops; G-AO

Procedures for splicing waterstops shall be submitted for approval.

SD-04 Samples

Field Molded Sealants and Primer; G-AO

One gallon of field-molded sealant and one quart of primer (when primer is recommended by the sealant manufacturer) shall be provided for testing.

Waterstops; G-AO

Waterstop materials and splice samples shall be submitted for inspection and testing and shall be identified to indicate manufacturer, type of material, size and quantity of material and shipment represented. Each materials sample shall be a piece not less than 12 inches long cut from each 200 feet of finished waterstop furnished, but not less than a total of 4 linear feet of each type and size furnished. For spliced segments of waterstops to be installed in the work, one spliced sample of each size and type for every 50 splices made in the factory and every 10 splices made at the job site shall be furnished for inspection and testing. The spliced samples shall be made using straight run pieces with the splice located at the mid-length of the sample and finished as required for the installed waterstop. The total length of each spliced sample shall be not less than 12 inches long.

SD-06 Test Reports

Premolded Expansion Joint Filler Strips; G-AO

Waterstops; G-AO

Certified manufacturer's test reports shall be provided for premolded expansion joint filler strips, compression seals and lubricant, and metallic waterstops to verify compliance with applicable specification.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Premolded Expansion Joint Filler Strips

Premolded expansion joint filler strips shall conform to ASTM D 1751 or ASTM D 1752, Type I, or resin impregnated fiberboard conforming to the physical requirements of ASTM D 1752.

2.1.2 Joint Seals and Sealants

2.1.3 Waterstops

2.1.3.1 Non-Metallic Waterstops

Polyvinylchloride waterstops shall conform to COE CRD-C 572.

2.2 TESTS, INSPECTIONS, AND VERIFICATIONS

2.2.1 Materials Tests

2.2.1.1 Non-Metallic Waterstops

Samples of materials and splices as required in paragraph WATERSTOPS shall be visually inspected and tested by and at the expense of the Government for compliance with COE CRD-C 513 or COE CRD-C 572 as applicable.

2.2.2 Splicing Waterstops

2.2.2.1 Procedure and Performance Qualifications

Procedure and performance qualifications for splicing waterstops shall be demonstrated in the presence of the Contracting Officer.

2.2.2.2 Non-Metallic Waterstops

Procedure and performance qualifications for splicing non-metallic waterstops shall be demonstrated by the manufacturer at the factory and the Contractor at the job site by each making three spliced samples of each size and type of finished waterstop.

PART 3 EXECUTION

3.1 INSTALLATION

Joint locations and details, including materials and methods of installation of joint fillers and waterstops, shall be as specified, as shown, and as directed. In no case shall any fixed metal be continuous through an expansion or contraction joint.

3.1.1 Expansion Joints

Premolded filler strips shall have oiled wood strips secured to the top thereof and shall be accurately positioned and secured against displacement to clean, smooth concrete surfaces. The wood strips shall be slightly tapered, dressed and of the size required to install filler strips at the desired level below the finished concrete surface and to form the groove for the joint sealant or seals to the size shown. Material used to secure premolded fillers and wood strips to concrete shall not harm the concrete and shall be compatible with the joint sealant or seals. The wood strips shall not be removed until after the concrete curing period. The groove shall be thoroughly cleaned of all laitance, curing compound, foreign materials, protrusions of hardened concrete and any dust which shall be blown out of the groove with oil-free compressed air.

3.1.2 Contraction Joints

Joints requiring a bond breaker shall be coated with curing compound or with bituminous paint. Waterstops shall be protected during application of bond breaking material to prevent them from being coated.

3.1.3 Waterstops

Waterstops shall be carefully and correctly positioned during installation to eliminate faulty installation that may result in joint leakage. The bottom of each waterstop shall be embedded a minimum of 6 inches in firm rock or sealed to other cut-off systems. All waterstops shall be installed so as to form a continuous watertight diaphragm in each joint. Adequate provision shall be made to support and protect the waterstops during the progress of work. Any waterstop punctured or damaged shall be replaced or repaired at the Contractor's expense. The concrete shall be thoroughly consolidated in the vicinity of the waterstop. Suitable guards shall be provided to protect exposed projecting edges and ends of partially embedded waterstops from damage when concrete placement has been discontinued.

3.1.3.1 Splices

Joints in waterstops shall be spliced together by qualified splicers using the approved splicing procedures to form a continuous watertight diaphragm. Splices shall be as followed:

- a. Non-Metallic Waterstops - All splices shall be made on a bench in a temporary shop provided at the site of the installation or at the manufacturer's plant. A miter guide and portable power saw shall be used to cut the ends to be joined to insure good alignment and contact between joined surfaces. Continuity of the characteristic features of the cross section of the waterstop (ribs, tabular center axis, protrusions and the like) shall be maintained across the splice.
- b. Polyvinylchloride Waterstops - Splices shall be made by heat sealing the adjacent surfaces in accordance with the approved procedure. A thermostatically controlled electrical heat source shall be used to make all splices. The correct temperature at which splices should be made will differ with the material concerned but the applied heat should be sufficient to melt but not char the plastic. Waterstops shall be reformed at splices with a remolding iron with ribs or corrugations to match the pattern of the waterstop. The spliced area, when cooled and bent by hand in as sharp an angle as possible, shall show no sign of separation.

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SECTION 03200A

CONCRETE REINFORCEMENT
02/04

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.

ACI INTERNATIONAL (ACI)

ACI 318/318R (2002) Building Code Requirements for
Structural Concrete and Commentary

ASTM INTERNATIONAL (ASTM)

ASTM A 615/A 615M (2003a) Deformed and Plain Billet-Steel
Bars for Concrete Reinforcement

CONCRETE REINFORCING STEEL INSTITUTE (CRSI)

CRSI 1MSP (2001) Manual of Standard Practice

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Reinforcement; G-DO

Detail drawings showing reinforcing steel placement, schedules, sizes, grades, and splicing and bending details. Drawings shall show support details including types, sizes and spacing.

SD-07 Certificates

Reinforcing Steel; G-AO

Certified copies of mill reports attesting that the reinforcing steel furnished contains no less than 25 percent recycled scrap steel and meets the requirements specified herein, prior to the

installation of reinforcing steel.

1.3 DELIVERY AND STORAGE

Reinforcement and accessories shall be stored off the ground on platforms, skids, or other supports.

PART 2 PRODUCTS

2.1 REINFORCING STEEL

Reinforcing steel shall be deformed bars conforming to ASTM A 615/A 615M , grades and sizes as indicated.

2.2 WIRE TIES

Wire ties shall be 16 gauge or heavier black annealed steel wire.

2.3 SUPPORTS

Bar supports for formed surfaces shall be designed and fabricated in accordance with CRSI 1MSP and shall be steel or precast concrete blocks. Precast concrete blocks shall have wire ties and shall be not less than 4 inches square when supporting reinforcement on ground. Precast concrete block shall have compressive strength equal to that of the surrounding concrete. Where concrete formed surfaces will be exposed to weather or where surfaces are to be painted, steel supports within 1/2 inch of concrete surface shall be galvanized, plastic protected or of stainless steel. Concrete supports used in concrete exposed to view shall have the same color and texture as the finish surface. For slabs on grade, supports shall be precast concrete blocks, plastic coated steel fabricated with bearing plates, or specifically designed wire-fabric supports fabricated of plastic.

PART 3 EXECUTION

3.1 REINFORCEMENT

Reinforcement shall be fabricated to shapes and dimensions shown and shall conform to the requirements of ACI 318/318R. Reinforcement shall be cold bent unless otherwise authorized. Bending may be accomplished in the field or at the mill. Bars shall not be bent after embedment in concrete. Safety caps shall be placed on all exposed ends of vertical concrete reinforcement bars that pose a danger to life safety. Wire tie ends shall face away from the forms.

3.1.1 Placement

Reinforcement shall be free from loose rust and scale, dirt, oil, or other deleterious coating that could reduce bond with the concrete. Reinforcement shall be placed in accordance with ACI 318/318R at locations shown plus or minus one bar diameter. Reinforcement shall not be continuous through expansion joints and shall be as indicated through construction or contraction joints. Concrete coverage shall be as

indicated or as required by ACI 318/318R. If bars are moved more than one bar diameter to avoid interference with other reinforcement, conduits or embedded items, the resulting arrangement of bars, including additional bars required to meet structural requirements, shall be approved before concrete is placed.

3.1.2 Splicing

Splices of reinforcement shall conform to ACI 318/318R and shall be made only as required or indicated. Splicing shall be by lapping. Lapped bars shall be placed in contact and securely tied or spaced transversely apart to permit the embedment of the entire surface of each bar in concrete. Lapped bars shall not be spaced farther apart than one-fifth the required length of lap or 6 inches.

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SECTION 03300A

CAST-IN-PLACE STRUCTURAL CONCRETE
11/01

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.

ACI INTERNATIONAL (ACI)

ACI 117	(1990) Standard Tolerances for Concrete Construction and Materials & Commentary
ACI 211.1	(1991) Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete
ACI 214.3R	(1988; R 1997) Simplified Version of the Recommended Practice for Evaluation of Strength Test Results of Concrete
ACI 305R	(1999) Hot Weather Concreting
ACI 318/318R	(2002) Building Code Requirements for Structural Concrete and Commentary

ASTM INTERNATIONAL (ASTM)

ASTM C 136	(2001) Sieve Analysis of Fine and Coarse Aggregates
ASTM C 143/C 143M	(2003) Slump of Hydraulic Cement Concrete
ASTM C 150	(2002ael) Portland Cement
ASTM C 171	(2003) Sheet Materials for Curing Concrete
ASTM C 172	(1999) Sampling Freshly Mixed Concrete
ASTM C 173	(1994ael) Air Content of Freshly Mixed Concrete by the Volumetric Method
ASTM C 192/C 192M	(2002) Making and Curing Concrete Test Specimens in the Laboratory

ASTM C 231	(2003) Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C 260	(2001) Air-Entraining Admixtures for Concrete
ASTM C 309	(2003) Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C 31/C 31M	(2003a) Making and Curing Concrete Test Specimens in the Field
ASTM C 33	(2003) Concrete Aggregates
ASTM C 39/C 39M	(2003) Compressive Strength of Cylindrical Concrete Specimens
ASTM C 42/C 42M	(2003) Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
ASTM C 494/C 494M	(1999ae1) Chemical Admixtures for Concrete
ASTM C 618	(2003) Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete
ASTM C 94/C 94M	(2003a) Ready-Mixed Concrete
ASTM C 940	(1998a) Expansion and Bleeding of Freshly Mixed Grouts for Preplaced-Aggregate Concrete in the Laboratory

NATIONAL READY MIXED CONCRETE ASSOCIATION (NRMCA)

NRMCA QC 3	(2002) Quality Control Manual: Section 3, Plant Certifications Checklist: Certification of Ready Mixed Concrete Production Facilities
NRMCA TMMB 100	(2001) Truck Mixer, Agitator and Front Discharge Concrete Carrier Standards

U.S. ARMY CORPS OF ENGINEERS (USACE)

COE CRD-C 104	(1980) Method of Calculation of the Fineness Modulus of Aggregate
COE CRD-C 400	(1963) Requirements for Water for Use in Mixing or Curing Concrete
COE CRD-C 521	(1981) Standard Test Method for Frequency and Amplitude of Vibrators for Concrete

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Mixture Proportions; G-AO

The results of trial mixture design studies along with a statement giving the maximum nominal coarse aggregate size and the proportions of ingredients that will be used in the manufacture of each strength or class of concrete, at least 14 days prior to commencing concrete placing operations. Aggregate weights shall be based on the saturated surface dry condition. The statement shall be accompanied by test results from an approved independent commercial testing laboratory, showing that mixture design studies have been made with materials proposed for the project and that the proportions selected will produce concrete of the qualities indicated. No substitutions shall be made in the materials used in the mixture design studies without additional tests to show that the quality of the concrete is satisfactory.

SD-06 Test Reports

Testing and Inspection for Contractor Quality Control; G-AO

Certified copies of laboratory test reports, including mill tests and all other test data, for portland cement, blended cement, pozzolan, ground granulated blast furnace slag, silica fume, aggregate, admixtures, and curing compound proposed for use on this project.

SD-07 Certificates

Qualifications; G-AO

Written documentation for Contractor Quality Control personnel.

1.3 QUALIFICATIONS

Contractor Quality Control personnel assigned to concrete construction shall be American Concrete Institute (ACI) Certified Workmen in one of the following grades or shall have written evidence of having completed similar qualification programs:

Concrete Construction Inspector, Level II

The foreman or lead journeyman of the flatwork finishing crew shall have similar qualification for ACI Concrete Flatwork Technician/Finisher or equal, with written documentation.

1.4 GENERAL REQUIREMENTS

1.4.1 Tolerances

Except as otherwise specified herein, tolerances for concrete batching, mixture properties, and construction as well as definition of terms and application practices shall be in accordance with ACI 117. 1.4.2 Strength Requirements and w/c Ratio

1.4.2.1 Strength Requirements

Specified compressive strength (f'c) shall be as follows:

COMPRESSIVE STRENGTH	STRUCTURE OR PORTION OF STRUCTURE
3000 psi at 28 days	All work

- a. Evaluation of Concrete Compressive Strength. Compressive strength specimens (6 by 12 inch cylinders) shall be fabricated by the Contractor and laboratory cured in accordance with ASTM C 31/C 31M and tested in accordance with ASTM C 39/C 39M. The strength of the concrete will be considered satisfactory so long as the average of all sets of three consecutive test results equals or exceeds the specified compressive strength f'c and no individual test result falls below the specified strength f'c by more than 500 psi. A "test" is defined as the average of two companion cylinders, or if only one cylinder is tested, the results of the single cylinder test. Additional analysis or testing, including taking cores and/or load tests may be required at the Contractor's expense when the strength of the concrete in the structure is considered potentially deficient.

- b. Investigation of Low-Strength Compressive Test Results. When any strength test of standard-cured test cylinders falls below the specified strength requirement by more than 500 psi or if tests of field-cured cylinders indicate deficiencies in protection and curing, steps shall be taken to assure that the load-carrying capacity of the structure is not jeopardized. When the strength of concrete in place is considered potentially deficient, cores shall be obtained and tested in accordance with ASTM C 42/C 42M. At least three representative cores shall be taken from each member or area of concrete in place that is considered potentially deficient. The location of cores will be determined by the Contracting Officer to least impair the strength of the structure. Concrete in the area represented by the core testing will be considered adequate if the average strength of the cores is equal to at least 85 percent of the specified strength requirement and if no single core is less than 75 percent of the specified strength requirement. Non-destructive tests (tests other than test cylinders or cores) shall not be used as a basis for acceptance or rejection. The Contractor shall perform the coring and repair the holes. Cores will be tested by the Government.

- c. Load Tests. If the core tests are inconclusive or impractical to obtain or if structural analysis does not confirm the safety of the structure, load tests may be directed by the Contracting Officer in accordance with the requirements of ACI 318/318R. Concrete work evaluated by structural analysis or by results of a load test as being understrength shall be corrected in a manner satisfactory to the Contracting Officer. All investigations, testing, load tests, and correction of deficiencies shall be performed by and at the expense of the Contractor and must be approved by the Contracting Officer, except that if all concrete is found to be in compliance with the drawings and specifications, the cost of investigations, testing, and load tests will be at the expense of the Government.

1.4.2.2 Water-Cement Ratio

Maximum water-cement ratio (w/c) for normal weight concrete shall be as follows:

WATER-CEMENT RATIO, BY WEIGHT	STRUCTURE OR PORTION OF STRUCTURE
0.48	All work

These w/c's may cause higher strengths than that required above for compressive or flexural strength. The maximum w/c required will be the equivalent w/c as determined by conversion from the weight ratio of water to cement plus pozzolan by the weight equivalency method as described in ACI 211.1.

1.4.3 Air Entrainment

Except as otherwise specified for lightweight concrete, all normal weight concrete shall be air entrained to contain between 4 and 7 percent total air. Specified air content shall be attained at point of placement into the forms. Air content for normal weight concrete shall be determined in accordance with ASTM C 231.

1.4.4 Slump

Slump of the concrete, as delivered to the point of placement into the forms, shall be within the following limits. Slump shall be determined in accordance with ASTM C 143/C 143M.

Structural Element	Slump	
_____	Minimum	Maximum
_____	_____	_____
All work	2 in.	4 in.
Any structural concrete approved for placement by pumping:		
At pump	2 in.	6 in.
At discharge of line	1 in.	4 in.

1.4.5 Concrete Temperature

The temperature of the concrete as delivered shall not exceed 90 degrees F.

When the ambient temperature during placing is 40 degrees F or less, or is expected to be at any time within 6 hours after placing, the temperature of the concrete as delivered shall be between 55 and 75 degrees F.

1.4.6 Size of Coarse Aggregate

The largest feasible nominal maximum size aggregate (NMSA) specified in paragraph AGGREGATES shall be used in each placement. However, nominal maximum size of aggregate shall not exceed any of the following: three-fourths of the minimum cover for reinforcing bars, three-fourths of the minimum clear spacing between reinforcing bars, one-fifth of the narrowest dimension between sides of forms, or one-third of the thickness of slabs.

1.5 MIXTURE PROPORTIONS

Concrete shall be composed of portland cement, other cementitious and pozzolanic materials as specified, aggregates, water and admixtures as specified.

1.5.1 Proportioning Studies for Normal Weight Concrete

Trial design batches, mixture proportioning studies, and testing requirements for various classes and types of concrete specified shall be the responsibility of the Contractor. Except as specified for flexural strength concrete, mixture proportions shall be based on compressive strength as determined by test specimens fabricated in accordance with ASTM C 192/C 192M and tested in accordance with ASTM C 39/C 39M. Samples of all materials used in mixture proportioning studies shall be representative of those proposed for use in the project and shall be accompanied by the manufacturer's or producer's test reports indicating compliance with these specifications. Trial mixtures having proportions, consistencies, and air content suitable for the work shall be made based on methodology described in ACI 211.1, using at least three different water-cement ratios for each type of mixture, which will produce a range of strength encompassing those required for each class and type of concrete required on the project. The maximum water-cement ratios required in subparagraph Water-Cement Ratio will be the equivalent water-cement ratio as determined by conversion from the weight ratio of water to cement plus pozzolan by the weight equivalency method as described in ACI 211.1. In the case where silica fume or GGBF slag is used, the weight of the silica fume and GGBF slag shall be included in the equations in ACI 211.1 for the term P, which is used to denote the weight of pozzolan. If pozzolan is used in the concrete mixture, the minimum pozzolan content shall be 15 percent by weight of the total cementitious material, and the maximum shall be 35 percent. Laboratory trial mixtures shall be designed for maximum permitted slump and air content. Separate sets of trial mixture studies shall be made for each combination of cementitious materials and each combination of admixtures proposed for use. No combination of either shall be used until proven by such studies, except that, if approved in writing and otherwise permitted by these specifications, an accelerator or a retarder may be used without

separate trial mixture study. Separate trial mixture studies shall also be made for concrete for any conveying or placing method proposed which requires special properties and for concrete to be placed in unusually difficult placing locations. The temperature of concrete in each trial batch shall be reported. For each water-cement ratio, at least three test cylinders for each test age shall be made and cured in accordance with ASTM C 192/C 192M. They shall be tested at 7 and 28 days in accordance with ASTM C 39/C 39M. From these test results, a curve shall be plotted showing the relationship between water-cement ratio and strength for each set of trial mix studies. In addition, a curve shall be plotted showing the relationship between 7 day and 28 day strengths. Each mixture shall be designed to promote easy and suitable concrete placement, consolidation and finishing, and to prevent segregation and excessive bleeding.

1.5.2 Average Compressive Strength Required for Mixtures

The mixture proportions selected during mixture design studies shall produce a required average compressive strength (f'_{cr}) exceeding the specified compressive strength (f'_c) by the amount indicated below. This required average compressive strength, f'_{cr} , will not be a required acceptance criteria during concrete production. However, whenever the daily average compressive strength at 28 days drops below f'_{cr} during concrete production, or daily average 7-day strength drops below a strength correlated with the 28-day f'_{cr} , the mixture shall be adjusted, as approved, to bring the daily average back up to f'_{cr} . During production, the required f'_{cr} shall be adjusted, as appropriate, based on the standard deviation being attained on the job.

1.5.2.1 Computations from Test Records

Where a concrete production facility has test records, a standard deviation shall be established in accordance with the applicable provisions of ACI 214.3R. Test records from which a standard deviation is calculated shall represent materials, quality control procedures, and conditions similar to those expected; shall represent concrete produced to meet a specified strength or strengths (f'_c) within 1,000 psi of that specified for proposed work; and shall consist of at least 30 consecutive tests. A strength test shall be the average of the strengths of two cylinders made from the same sample of concrete and tested at 28 days. Required average compressive strength f'_{cr} used as the basis for selection of concrete proportions shall be the larger of the equations that follow using the standard deviation as determined above:

$$f'_{cr} = f'_c + 1.34S \text{ where units are in psi}$$

$$f'_{cr} = f'_c + 2.33S - 500 \text{ where units are in psi}$$

Where S = standard deviation

Where a concrete production facility does not have test records meeting the requirements above but does have a record based on 15 to 29 consecutive tests, a standard deviation shall be established as the product of the calculated standard deviation and a modification factor from the following table:

NUMBER OF TESTS	MODIFICATION FACTOR FOR STANDARD DEVIATION
15	1.16
20	1.08
25	1.03
30 or more	1.00

1.5.2.2 Computations without Previous Test Records

When a concrete production facility does not have sufficient field strength test records for calculation of the standard deviation, the required average strength f'_{cr} shall be determined as follows:

- a. If the specified compressive strength f'_c is less than 3,000 psi,

$$f'_{cr} = f'_c + 1000 \text{ psi}$$

- b. If the specified compressive strength f'_c is 3,000 to 5,000 psi,

$$f'_{cr} = f'_c + 1,200 \text{ psi}$$

1.6 STORAGE OF MATERIALS

Cement and other cementitious materials shall be stored in weathertight buildings, bins, or silos which will exclude moisture and contaminants and keep each material completely separated. Aggregate stockpiles shall be arranged and used in a manner to avoid excessive segregation and to prevent contamination with other materials or with other sizes of aggregates. Aggregate shall not be stored directly on ground unless a sacrificial layer is left undisturbed. Reinforcing bars and accessories shall be stored above the ground on platforms, skids or other supports. Other materials shall be stored in such a manner as to avoid contamination and deterioration. Admixtures which have been in storage at the project site for longer than 6 months or which have been subjected to freezing shall not be used unless retested and proven to meet the specified requirements. Materials shall be capable of being accurately identified after bundles or containers are opened.

1.7 GOVERNMENT ASSURANCE INSPECTION AND TESTING

Day-to day inspection and testing shall be the responsibility of the Contractor Quality Control (CQC) staff. However, representatives of the Contracting Officer can and will inspect construction as considered appropriate and will monitor operations of the Contractor's CQC staff. Government inspection or testing will not relieve the Contractor of any of his CQC responsibilities.

1.7.1 Fresh Concrete

Fresh concrete will be sampled as delivered in accordance with ASTM C 172 and tested in accordance with these specifications, as considered necessary.

1.7.2 Inspection

Concrete operations may be tested and inspected by the Government as the project progresses. Failure to detect defective work or material will not prevent rejection later when a defect is discovered nor will it obligate the Government for final acceptance.

PART 2 PRODUCTS

2.1 CEMENTITIOUS MATERIALS

Cementitious Materials shall be portland cement, or portland cement in combination with pozzolan and shall conform to appropriate specifications listed below. Use of cementitious materials in concrete which will have surfaces exposed in the completed structure shall be restricted so there is no change in color, source, or type of cementitious material.

2.1.1 Portland Cement

ASTM C 150, Type I low alkali with a maximum 15 percent amount of tricalcium aluminate, or Type II low alkali.

2.1.2 High-Early-Strength Portland Cement

ASTM C 150, Type III with tricalcium aluminate limited to 5percent, low alkali. Type III cement shall be used only in isolated instances and only when approved in writing.

2.1.3 Pozzolan (Fly Ash)

ASTM C 618, Class C or F with the optional requirements for multiple factor, drying shrinkage, and uniformity from Table 2A of ASTM C 618. Requirement for maximum alkalies from Table 1A of ASTM C 618 shall apply. If pozzolan is used, it shall never be less than 15 percent nor more than 35 percent by weight of the total cementitious material. 2.2 AGGREGATES

Aggregates shall conform to the following.

2.2.1 Fine Aggregate

Fine aggregate shall conform to the quality and gradation requirements of ASTM C 33.

2.2.2 Coarse Aggregate

Coarse aggregate shall conform to ASTM C 33, Class 5S, size designation 67.

2.3 CHEMICAL ADMIXTURES

Chemical admixtures, when required or permitted, shall conform to the appropriate specification listed. Admixtures shall be furnished in liquid form and of suitable concentration for easy, accurate control of dispensing.

2.3.1 Air-Entraining Admixture

ASTM C 260 and shall consistently entrain the air content in the specified ranges under field conditions.

2.3.2 Accelerating Admixture

ASTM C 494/C 494M, Type C or E, except that calcium chloride or admixtures containing calcium chloride shall not be used.

2.4 CURING MATERIALS

2.4.1 Impervious-Sheet

Impervious-sheet materials shall conform to ASTM C 171, type optional, except, that polyethylene sheet shall not be used.

2.4.2 Membrane-Forming Compound

Membrane-Forming curing compound shall conform to ASTM C 309, Type 1-D or 2.

2.4.3 Burlap and Cotton Mat

Burlap and cotton mat used for curing shall conform to AASHTO M 182.

2.5 WATER

Water for mixing and curing shall be fresh, clean, potable, and free of injurious amounts of oil, acid, salt, or alkali, except that non-potable water may be used if it meets the requirements of COE CRD-C 400.

2.6 JOINT MATERIALS

2.6.1 Joint Fillers, Sealers, and Waterstops

Expansion joint fillers and waterstops shall be in accordance with Section 03150A EXPANSION JOINTS, CONTRACTION JOINTS, AND WATERSTOPS.

PART 3 EXECUTION

3.1 PREPARATION FOR PLACING

Before commencing concrete placement, the following shall be performed. Surfaces to receive concrete shall be clean and free from frost, ice, mud, and water. Forms shall be in place, cleaned, coated, and adequately supported, in accordance with Section 03100A STRUCTURAL CONCRETE FORMWORK. Reinforcing steel shall be in place, cleaned, tied, and adequately supported, in accordance with Section 03200A CONCRETE REINFORCEMENT. Transporting and conveying equipment shall be in-place, ready for use, clean, and free of hardened concrete and foreign material. Equipment for consolidating concrete shall be at the placing site and in proper working order. Equipment and material for curing and for protecting concrete from weather or mechanical damage shall be at the placing site, in proper working condition and in sufficient amount for the entire placement. When hot, windy conditions during concreting appear probable, equipment and material shall be at the placing site to provide windbreaks, shading,

fogging, or other action to prevent plastic shrinkage cracking or other damaging drying of the concrete.

3.1.1 Foundations

3.1.1.1 Concrete on Earth Foundations

Earth (subgrade, base, or subbase courses) surfaces upon which concrete is to be placed shall be clean, damp, and free from debris, frost, ice, and standing or running water. Prior to placement of concrete, the foundation shall be well drained and shall be satisfactorily graded and uniformly compacted.

3.1.1.2 Excavated Surfaces in Lieu of Forms

Concrete for footings may be placed directly against the soil provided the earth or rock has been carefully trimmed, is uniform and stable, and meets the compaction requirements of Section 02331A LEVEE EMBANKMENT AND EARTHWORK. The concrete shall be placed without becoming contaminated by loose material, and the outline of the concrete shall be within the specified tolerances.

3.1.2 Previously Placed Concrete

Concrete surfaces to which additional concrete is to be bonded shall be prepared for receiving the next horizontal lift by cleaning the construction joint surface with either air-water cutting, sandblasting, high-pressure water jet, or other approved method. Concrete at the side of vertical construction joints shall be prepared as approved by the Contracting Officer. Air-water cutting shall not be used on formed surfaces or surfaces congested with reinforcing steel. Regardless of the method used, the resulting surfaces shall be free from all laitance and inferior concrete so that clean surfaces of well bonded coarse aggregate are exposed and make up at least 10-percent of the surface area, distributed uniformly throughout the surface. The edges of the coarse aggregate shall not be undercut. The surface of horizontal construction joints shall be kept continuously wet for the first 12 hours during the 24-hour period prior to placing fresh concrete. The surface shall be washed completely clean as the last operation prior to placing the next lift.

3.1.2.1 High-Pressure Water Jet

A stream of water under a pressure of not less than 3,000 psi shall be used for cutting and cleaning. Its use shall be delayed until the concrete is sufficiently hard so that only the surface skin or mortar is removed and there is no undercutting of coarse-aggregate particles. If the waterjet is incapable of a satisfactory cleaning, the surface shall be cleaned by sandblasting.

3.1.2.2 Wet Sandblasting

Wet sandblasting shall be used after the concrete has reached sufficient strength to prevent undercutting of the coarse aggregate particles. After wet sandblasting, the surface of the concrete shall then be washed thoroughly to remove all loose materials.

3.1.2.3 Waste Disposal

The method used in disposing of waste water employed in cutting, washing, and rinsing of concrete surfaces shall be such that the waste water does not stain, discolor, or affect exposed surfaces of the structures, or damage the environment of the project area. The method of disposal shall be subject to approval.

3.1.3 Embedded Items

Before placement of concrete, care shall be taken to determine that all embedded items are firmly and securely fastened in place as indicated on the drawings, or required. Conduit and other embedded items shall be clean and free of oil and other foreign matter such as loose coatings or rust, paint, and scale. The embedding of wood in concrete will be permitted only when specifically authorized or directed. Voids in sleeves, inserts, and anchor slots shall be filled temporarily with readily removable materials to prevent the entry of concrete into voids. Tack welding shall not be performed on or to embedded items.

3.2 CONCRETE PRODUCTION

3.2.1 Batching, Mixing, and Transporting Concrete

Concrete shall be furnished from a ready-mixed concrete plant. Ready-mixed concrete shall be batched, mixed, and transported in accordance with ASTM C 94/C 94M, except as otherwise specified. Truck mixers, agitators, and nonagitating transporting units shall comply with NRMCA TMMB 100. Ready-mix plant equipment and facilities shall be certified in accordance with NRMCA QC 3. Approved batch tickets shall be furnished for each load of ready-mixed concrete.

3.3 TRANSPORTING CONCRETE TO PROJECT SITE

Concrete shall be transported to the placing site in truck mixers.

3.4 CONVEYING CONCRETE ON SITE

Concrete shall be conveyed from mixer or transporting unit to forms as rapidly as possible and within the time interval specified by methods which will prevent segregation or loss of ingredients using following equipment. Conveying equipment shall be cleaned before each placement.

3.4.1 Buckets

The interior hopper slope shall be not less than 58 degrees from the horizontal, the minimum dimension of the clear gate opening shall be at least 5 times the nominal maximum-size aggregate, and the area of the gate opening shall not be less than 2 square feet. The maximum dimension of the gate opening shall not be greater than twice the minimum dimension. The bucket gates shall be essentially grout tight when closed and may be manually, pneumatically, or hydraulically operated except that buckets larger than 2 cubic yards shall not be manually operated. The design of the

bucket shall provide means for positive regulation of the amount and rate of deposit of concrete in each dumping position.

3.4.2 Transfer Hoppers

Concrete may be charged into nonagitating hoppers for transfer to other conveying devices. Transfer hoppers shall be capable of receiving concrete directly from delivery vehicles and shall have conical-shaped discharge features. The transfer hopper shall be equipped with a hydraulically operated gate and with a means of external vibration to effect complete discharge. Concrete shall not be held in nonagitating transfer hoppers more than 30 minutes.

3.4.3 Trucks

Truck mixers operating at agitating speed or truck agitators used for transporting plant-mixed concrete shall conform to the requirements of ASTM C 94/C 94M.

3.4.4 Chutes

When concrete can be placed directly from a truck mixer, agitator, or nonagitating equipment, the chutes normally attached to this equipment by the manufacturer may be used. A discharge deflector shall be used when required by the Contracting Officer. Separate chutes and other similar equipment will not be permitted for conveying concrete.

3.4.5 Belt Conveyors

Belt conveyors shall be designed and operated to assure a uniform flow of concrete from mixer to final place of deposit without segregation of ingredients or loss of mortar and shall be provided with positive means, such as discharge baffle or hopper, for preventing segregation of the concrete at the transfer points and the point of placing. Belt conveyors shall be constructed such that the idler spacing shall not exceed 36 inches. The belt speed shall be a minimum of 300 feet per minute and a maximum of 750 feet per minute. If concrete is to be placed through installed horizontal or sloping reinforcing bars, the conveyor shall discharge concrete into a pipe or elephant truck that is long enough to extend through the reinforcing bars.

3.4.6 Concrete Pumps

Concrete may be conveyed by positive displacement pump when approved. The pumping equipment shall be piston or squeeze pressure type; pneumatic placing equipment shall not be used. The pipeline shall be rigid steel pipe or heavy-duty flexible hose. The inside diameter of the pipe shall be at least 3 times the nominal maximum-size coarse aggregate in the concrete mixture to be pumped but not less than 4 inches. Aluminum pipe shall not be used.

3.5 PLACING CONCRETE

Mixed concrete shall be discharged within 1-1/2 hours or before the mixer

drum has revolved 300 revolutions, whichever comes first after the introduction of the mixing water to the cement and aggregates. When the concrete temperature exceeds 85 degrees F, the time shall be reduced to 45 minutes. Concrete shall be placed within 15 minutes after it has been discharged from the transporting unit. Concrete shall be handled from mixer or transporting unit to forms in a continuous manner until the approved unit of operation is completed. Adequate scaffolding, ramps and walkways shall be provided so that personnel and equipment are not supported by in-place reinforcement. Placing will not be permitted when the sun, heat, wind, or limitations of facilities furnished by the Contractor prevent proper consolidation, finishing and curing. Sufficient placing capacity shall be provided so that concrete can be kept free of cold joints.

3.5.1 Depositing Concrete

Concrete shall be deposited as close as possible to its final position in the forms, and there shall be no vertical drop greater than 5 feet except where suitable equipment is provided to prevent segregation and where specifically authorized. Depositing of the concrete shall be so regulated that it will be effectively consolidated in horizontal layers not more than 12 inches thick, except that all slabs shall be placed in a single layer. Concrete to receive other construction shall be screeded to the proper level. Concrete shall be deposited continuously in one layer or in layers so that fresh concrete is deposited on in-place concrete that is still plastic. Fresh concrete shall not be deposited on concrete that has hardened sufficiently to cause formation of seams or planes of weakness within the section. Concrete that has surface dried, partially hardened, or contains foreign material shall not be used. When temporary spreaders are used in the forms, the spreaders shall be removed as their service becomes unnecessary.

3.5.2 Consolidation

Immediately after placing, each layer of concrete shall be consolidated by internal vibrators, except for slabs 4 inches thick or less. The vibrators shall at all times be adequate in effectiveness and number to properly consolidate the concrete; a spare vibrator shall be kept at the jobsite during all concrete placing operations. The vibrators shall have a frequency of not less than 10,000 vibrations per minute, an amplitude of at least 0.025 inch, and the head diameter shall be appropriate for the structural member and the concrete mixture being placed. Vibrators shall be inserted vertically at uniform spacing over the area of placement. The distance between insertions shall be approximately 1-1/2 times the radius of action of the vibrator so that the area being vibrated will overlap the adjacent just-vibrated area by a reasonable amount. The vibrator shall penetrate rapidly to the bottom of the layer and at least 6 inches into the preceding layer if there is such. Vibrator shall be held stationary until the concrete is consolidated and then vertically withdrawn slowly while operating. Form vibrators shall not be used unless specifically approved and unless forms are constructed to withstand their use. Vibrators shall not be used to move concrete within the forms. Slabs 4 inches and less in thickness shall be consolidated by properly designed vibrating screeds or other approved technique. Frequency and amplitude of vibrators shall be

determined in accordance with COE CRD-C 521. Grate tampers ("jitterbugs") shall not be used.

3.5.3 Cold Weather Requirements

Special protection measures, approved by the Contracting Officer, shall be used if freezing temperatures are anticipated before the expiration of the specified curing period. The ambient temperature of the air where concrete is to be placed and the temperature of surfaces to receive concrete shall be not less than 40 degrees F. The temperature of the concrete when placed shall be not less than 50 degrees F nor more than 75 degrees F. Heating of the mixing water or aggregates will be required to regulate the concrete placing temperature. Materials entering the mixer shall be free from ice, snow, or frozen lumps. Salt, chemicals or other materials shall not be incorporated in the concrete to prevent freezing. Upon written approval, an accelerating admixture conforming to ASTM C 494/C 494M, Type C or E may be used, provided it contains no calcium chloride. Calcium chloride shall not be used.

3.5.4 Hot Weather Requirements

When the ambient temperature during concrete placing is expected to exceed 85 degrees F, the concrete shall be placed and finished with procedures previously submitted and as specified herein. The concrete temperature at time of delivery to the forms shall not exceed the temperature shown in the table below when measured in accordance with ASTM C 1064/C 1064M. Cooling of the mixing water or aggregates or placing concrete in the cooler part of the day may be required to obtain an adequate placing temperature. A retarder may be used, as approved, to facilitate placing and finishing. Steel forms and reinforcements shall be cooled as approved prior to concrete placement when steel temperatures are greater than 120 degrees F. Conveying and placing equipment shall be cooled if necessary to maintain proper concrete-placing temperature.

Maximum Allowable Concrete Placing Temperature

Relative Humidity, Percent, During Time of Concrete Placement	Maximum Allowable Concrete Temperature Degrees
Greater than 60	90 F
40-60	85 F
Less than 40	80 F

3.5.5 Prevention of Plastic Shrinkage Cracking

During hot weather with low humidity, and particularly with appreciable wind, as well as interior placements when space heaters produce low humidity, the Contractor shall be alert to the tendency for plastic shrinkage cracks to develop and shall institute measures to prevent this. Particular care shall be taken if plastic shrinkage cracking is potentially imminent and especially if it has developed during a previous placement.

Periods of high potential for plastic shrinkage cracking can be anticipated by use of Fig. 2.1.5 of ACI 305R. In addition the concrete placement shall be further protected by erecting shades and windbreaks and by applying fog sprays of water, sprinkling, ponding or wet covering. Plastic shrinkage cracks that occur shall be filled by injection of epoxy resin as directed, after the concrete hardens. Plastic shrinkage cracks shall never be troweled over or filled with slurry.

3.5.6 Placing Concrete in Congested Areas

Special care shall be used to ensure complete filling of the forms, elimination of all voids, and complete consolidation of the concrete when placing concrete in areas congested with reinforcing bars, embedded items, waterstops and other tight spacing. An appropriate concrete mixture shall be used, and the nominal maximum size of aggregate (NMSA) shall meet the specified criteria when evaluated for the congested area. Vibrators with heads of a size appropriate for the clearances available shall be used, and the consolidation operation shall be closely supervised to ensure complete and thorough consolidation at all points. Where necessary, splices of reinforcing bars shall be alternated to reduce congestion. Where two mats of closely spaced reinforcing are required, the bars in each mat shall be placed in matching alignment to reduce congestion. Reinforcing bars may be temporarily crowded to one side during concrete placement provided they are returned to exact required location before concrete placement and consolidation are completed.

3.6 JOINTS

Joints shall be located and constructed as indicated or approved. Joints not indicated on the drawings shall be located and constructed to minimize the impact on the strength of the structure. Joints shall be perpendicular to the main reinforcement. All reinforcement shall be continued across joints; except that reinforcement or other fixed metal items shall not be continuous through expansion joints, or through construction or contraction joints in slabs on grade. Reinforcement shall be 2 inches clear from each joint.

3.6.1 Construction Joints

For concrete other than slabs on grade, construction joints shall be located so that the unit of operation does not exceed 60 feet. Concrete shall be placed continuously so that each unit is monolithic in construction. Fresh concrete shall not be placed against adjacent hardened concrete until it is at least 24 hours old. Construction joints shall be located as indicated or approved. Where concrete work is interrupted by weather, end of work shift or other similar type of delay, location and type of construction joint shall be subject to approval of the Contracting Officer. Unless otherwise indicated and except for slabs on grade, reinforcing steel shall extend through construction joints. 3.6.2

Expansion Joints

Installation of expansion joints and sealing of these joints shall conform to the requirements of Section 03151A EXPANSION, CONTRACTION AND CONSTRUCTION JOINTS IN CONCRETE FOR CIVIL WORKS.

3.6.3 Waterstops

Waterstops shall be installed in conformance with the locations and details shown on the drawings using materials and procedures specified in Section 03151A EXPANSION, CONTRACTION AND CONSTRUCTION JOINTS IN CONCRETE FOR CIVIL WORKS.

3.7 FINISHING FORMED SURFACES

Forms, form materials, and form construction are specified in Section 03100A STRUCTURAL CONCRETE FORMWORK. Finishing of formed surfaces shall be as specified herein. Unless another type of architectural or special finish is specified, surfaces shall be left with the texture imparted by the forms except that defective surfaces shall be repaired. Unless painting of surfaces is required, uniform color of the concrete shall be maintained by use of only one mixture without changes in materials or proportions for any structure or portion of structure that requires a B finish. Except for major defects, as defined hereinafter, surface defects shall be repaired as specified herein within 24 hours after forms are removed. Repairs of the so-called "plaster-type" will not be permitted in any location. Tolerances of formed surfaces shall conform to the requirements of ACI 117. These tolerances apply to the finished concrete surface, not to the forms themselves; forms shall be set true to line and grade. Form tie holes requiring repair and other defects whose depth is at least as great as their surface diameter shall be repaired as specified in paragraph Damp-Pack Mortar Repair. Defects whose surface diameter is greater than their depth shall be repaired as specified in paragraph Repair of Major Defects. Repairs shall be finished flush with adjacent surfaces and with the same surface texture. The cement used for all repairs shall be a blend of job cement with white cement proportioned so that the final color after curing and aging will be the same as the adjacent concrete. Concrete with excessive honeycomb, or other defects which affect the strength of the member, will be rejected. Repairs shall be demonstrated to be acceptable and free from cracks or loose or drummy areas at the completion of the contract and, for B Finish, shall be inconspicuous. Repairs not meeting these requirements will be rejected and shall be replaced.

3.7.1 Class B Finish

Class B finish is required for surfaces exposed to view. Fins, ravelings, and loose material shall be removed, all surface defects over 1/2 inch in diameter or more than 1/2 inch deep, shall be repaired and, except as otherwise indicated or as specified in Section 03101A FORMWORK FOR CONCRETE, holes left by removal of form ties shall be reamed and filled. Defects more than 1/2 inch in diameter shall be cut back to sound concrete, but in all cases at least 1 inch deep.

3.7.2 Class D Finish

Class D finish is required for surfaces not exposed to view. Fins, ravelings, and loose material shall be removed, and, except as otherwise indicated or as specified in Section 03100A STRUCTURAL CONCRETE FORMWORK, holes left by removal of form ties shall be reamed and filled. Honeycomb

and other defects more than 1/2 inch deep or more than 2 inches in diameter shall be repaired. Defects more than 2 inches in diameter shall be cut back to sound concrete, but in all cases at least 1 inch deep.

3.8 REPAIRS

3.8.1 Damp-Pack Mortar Repair

Form tie holes requiring repair and other defects whose depth is at least as great as their surface diameter but not over 4 inches shall be repaired by the damp-pack mortar method. Form tie holes shall be reamed and other similar defects shall be cut out to sound concrete. The void shall then be thoroughly cleaned, thoroughly wetted, brush-coated with a thin coat of neat cement grout and filled with mortar. Mortar shall be a stiff mix of 1 part portland cement to 2 parts fine aggregate passing the No. 16 mesh sieve, and minimum amount of water. Only sufficient water shall be used to produce a mortar which, when used, will stick together on being molded into a ball by a slight pressure of the hands and will not exude water but will leave the hands damp. Mortar shall be mixed and allowed to stand for 30 to 45 minutes before use with remixing performed immediately prior to use. Mortar shall be thoroughly tamped in place in thin layers using a hammer and hardwood block. Holes passing entirely through walls shall be completely filled from the inside face by forcing mortar through to the outside face. All holes shall be packed full. Damp-pack repairs shall be moist cured for at least 48 hours.

3.8.2 Repair of Major Defects

Major defects will be considered to be those more than 1/2 inch deep or, for B finish, more than 1/2 inch in diameter and, for D finish, more than 2 inches in diameter. Also included are any defects of any kind whose depth is over 4 inches or whose surface diameter is greater than their depth. Major defects shall be repaired as specified below.

3.8.2.1 Surface Application of Mortar Repair

Defective concrete shall be removed, and removal shall extend into completely sound concrete. Approved equipment and procedures which will not cause cracking or microcracking of the sound concrete shall be used. If reinforcement is encountered, concrete shall be removed so as to expose the reinforcement for at least 2 inches on all sides. All such defective areas greater than 12 square inches shall be outlined by saw cuts at least 1 inch deep. Defective areas less than 12 square inches shall be outlined by a 1 inch deep cut with a core drill in lieu of sawing. All saw cuts shall be straight lines in a rectangular pattern in line with the formwork panels. After concrete removal, the surface shall be thoroughly cleaned by high pressure washing to remove all loose material. Surfaces shall be kept continually saturated for the first 12 of the 24 hours immediately before placing mortar and shall be damp but not wet at the time of commencing mortar placement. The Contractor, at his option, may use either hand-placed mortar or mortar placed with a mortar gun. If hand-placed mortar is used, the edges of the cut shall be perpendicular to the surface of the concrete. The prepared area shall be brush-coated with a thin coat of neat cement grout. The repair shall then be made using a stiff mortar,

preshrunk by allowing the mixed mortar to stand for 30 to 45 minutes and then remixed, thoroughly tamped into place in thin layers. If hand-placed mortar is used, the Contractor shall test each repair area for drumminess by firm tapping with a hammer and shall inspect for cracks, both in the presence of the Contracting Officer's representative, immediately before completion of the contract, and shall replace any showing drumminess or cracking. If mortar placed with a mortar gun is used, the gun shall be a small compressed air-operated gun to which the mortar is slowly hand fed and which applies the mortar to the surface as a high-pressure stream, as approved. Repairs made using shotcrete equipment will not be accepted. The mortar used shall be the same mortar as specified for damp-pack mortar repair. If gun-placed mortar is used, the edges of the cut shall be beveled toward the center at a slope of 1:1. All surface applied mortar repairs shall be continuously moist cured for at least 7 days. Moist curing shall consist of several layers of saturated burlap applied to the surface immediately after placement is complete and covered with polyethylene sheeting, all held closely in place by a sheet of plywood or similar material rigidly braced against it. Burlap shall be kept continually wet.

3.8.2.2 Repair of Deep and Large Defects

Deep and large defects will be those that are more than 6 inches deep and also have an average diameter at the surface more than 18 inches or that are otherwise so identified by the Project Office. Such defects shall be repaired as specified herein or directed, except that defects which affect the strength of the structure shall not be repaired and that portion of the structure shall be completely removed and replaced. Deep and large defects shall be repaired by procedures approved in advance including forming and placing special concrete using applied pressure during hardening. Preparation of the repair area shall be as specified for surface application of mortar. In addition, the top edge (surface) of the repair area shall be sloped at approximately 20 degrees from the horizontal, upward toward the side from which concrete will be placed. The special concrete shall be a concrete mixture with low water content and low slump, and shall be allowed to age 30 to 60 minutes before use. Concrete containing a specified expanding admixture may be used in lieu of the above mixture; the paste portion of such concrete mixture shall be designed to have an expansion between 2.0 and 4.0 percent when tested in accordance with ASTM C 940. A full width "chimney" shall be provided at the top of the form on the placing side to ensure filling to the top of the opening. A pressure cap shall be used on the concrete in the chimney with simultaneous tightening and revibrating the form during hardening to ensure a tight fit for the repair. The form shall be removed after 24 hours and immediately the chimney shall be carefully chipped away to avoid breaking concrete out of the repair; the surface of the repair concrete shall be dressed as required.

3.9 FINISHING UNFORMED SURFACES

The finish of all unformed surfaces shall meet the requirements of paragraph Tolerances in PART 1, when tested as specified herein.

3.9.1 General

The ambient temperature of spaces adjacent to unformed surfaces being finished and of the base on which concrete will be placed shall be not less than 50 degrees F. In hot weather all requirements of paragraphs Hot Weather Requirements and Prevention of Plastic Shrinkage Cracking shall be met. Unformed surfaces that are not to be covered by additional concrete or backfill shall have a float finish, with additional finishing as specified below, and shall be true to the elevation shown on the drawings. Surfaces to receive additional concrete or backfill shall be brought to the elevation shown on the drawings, properly consolidated, and left true and regular. Unless otherwise shown on the drawings, exterior surfaces shall be sloped for drainage, as directed. Where drains are provided, interior floors shall be evenly sloped to the drains. Joints shall be carefully made with a jointing or edging tool. The finished surfaces shall be protected from stains or abrasions. Grate tampers or "jitterbugs" shall not be used for any surfaces. The dusting of surfaces with dry cement or other materials or the addition of any water during finishing shall not be permitted. If bleedwater is present prior to finishing, the excess water shall be carefully dragged off or removed by absorption with porous materials such as burlap. During finishing operations, extreme care shall be taken to prevent over finishing or working water into the surface; this can cause "crazing" (surface shrinkage cracks which appear after hardening) of the surface. Any slabs with surfaces which exhibit significant crazing shall be removed and replaced. During finishing operations, surfaces shall be checked with a 10 foot straightedge, applied in both directions at regular intervals while the concrete is still plastic, to detect high or low areas.

3.9.2 Troweled Finish

After the surface moisture has disappeared, unformed surfaces shall be steel-troweled to a smooth, even, dense finish, free from blemishes including trowel marks. Care shall be taken to prevent blistering and if such occurs, troweling shall immediately be stopped and operations and surfaces corrected. A final hard steel troweling shall be done by hand, with the trowel tipped, and using hard pressure, when the surface is at a point that the trowel will produce a ringing sound. The finished surface shall be thoroughly consolidated and shall be essentially free of trowel marks and be uniform in texture and appearance. The concrete mixture used for troweled finished areas shall be adjusted, if necessary, in order to provide sufficient fines (cementitious material and fine sand) to finish properly.

3.10 CURING AND PROTECTION

3.10.1 General

Concrete shall be cured by an approved method for the period of time given below:

Concrete with Type III cement	3 days
All other concrete	7 days

Immediately after placement, concrete shall be protected from premature

drying, extremes in temperatures, rapid temperature change, mechanical injury and damage from rain and flowing water for the duration of the curing period. Air and forms in contact with concrete shall be maintained at a temperature above 50 degrees F for the first 3 days and at a temperature above 32 degrees F for the remainder of the specified curing period. Exhaust fumes from combustion heating units shall be vented to the outside of the enclosure, and heaters and ducts shall be placed and directed so as not to cause areas of overheating and drying of concrete surfaces or to create fire hazards. Materials and equipment needed for adequate curing and protection shall be available and at the site prior to placing concrete. No fire or excessive heat, including welding, shall be permitted near or in direct contact with the concrete at any time. Except for plastic coated burlap, impervious sheeting alone shall not be used for curing.

3.10.2 Moist Curing

Concrete to be moist-cured shall be maintained continuously wet for the entire curing period, commencing immediately after finishing. If water or curing materials used stain or discolor concrete surfaces which are to be permanently exposed, the concrete surfaces shall be cleaned as approved. When wooden forms are left in place during curing, they shall be kept wet at all times. If steel forms are used in hot weather, nonsupporting vertical forms shall be broken loose from the concrete soon after the concrete hardens and curing water continually applied in this void. If the forms are removed before the end of the curing period, curing shall be carried out as on unformed surfaces, using suitable materials. Surfaces shall be cured by ponding, by continuous sprinkling, by continuously saturated burlap or cotton mats, or by continuously saturated plastic coated burlap. Burlap and mats shall be clean and free from any contamination and shall be completely saturated before being placed on the concrete. The Contractor shall have an approved work system to ensure that moist curing is continuous 24 hours per day.

3.10.3 Membrane Forming Curing Compounds

Concrete may be cured with a pigmented curing compound in lieu of moist curing. Membrane curing compound shall not be used on surfaces that are maintained at curing temperatures with free steam. Curing compound shall be applied to formed surfaces immediately after the forms are removed and prior to any patching or other surface treatment except the cleaning of loose sand, mortar, and debris from the surface. All surfaces shall be thoroughly moistened with water. Curing compound shall be applied to slab surfaces as soon as the bleeding water has disappeared, with the tops of joints being temporarily sealed to prevent entry of the compound and to prevent moisture loss during the curing period. The curing compound shall be applied in a two-coat continuous operation by approved motorized power-spraying equipment operating at a minimum pressure of 75 psi, at a uniform coverage of not more than 400 square feet per gallon for each coat, and the second coat shall be applied perpendicular to the first coat. Concrete surfaces which have been subjected to rainfall within 3 hours after curing compound has been applied shall be resprayed by the method and at the coverage specified. Surfaces on which clear compound is used shall be shaded from direct rays of the sun for the first 3 days. Surfaces

coated with curing compound shall be kept free of foot and vehicular traffic, and from other sources of abrasion and contamination during the curing period.

3.10.4 Ponding or Immersion

Concrete shall be continually immersed throughout the curing period. Water shall not be more than 20 degrees F less than the temperature of the concrete.

3.10.5 Cold Weather Curing and Protection

When the daily ambient low temperature is less than 32 degrees F the temperature of the concrete shall be maintained above 40 degrees F for the first seven days after placing. During the period of protection removal, the air temperature adjacent to the concrete surfaces shall be controlled so that concrete near the surface will not be subjected to a temperature differential of more than 25 degrees F as determined by suitable temperature measuring devices furnished by the Government, as required, and installed adjacent to the concrete surface and 2 inches inside the surface of the concrete. The installation of the thermometers shall be made by the Contractor as directed.

3.11 TESTING AND INSPECTION FOR CONTRACTOR QUALITY CONTROL

The Contractor shall perform the inspection and tests described below and, based upon the results of these inspections and tests, shall take the action required and shall submit specified reports. When, in the opinion of the Contracting Officer, the concreting operation is out of control, concrete placement shall cease and the operation shall be corrected. The laboratory performing the tests shall be onsite and shall conform with ASTM C 1077. Materials may be subjected to check testing by the Government from samples obtained at the manufacturer, at transfer points, or at the project site. The Government will inspect the laboratory, equipment, and test procedures prior to start of concreting operations for conformance with ASTM C 1077.

3.11.1 Grading and Corrective Action

3.11.1.1 Fine Aggregate

At least once during each shift when the concrete plant is operating, there shall be one sieve analysis and fineness modulus determination in accordance with ASTM C 136 and COE CRD-C 104 for the fine aggregate or for each fine aggregate if it is batched in more than one size or classification. The location at which samples are taken may be selected by the Contractor as the most advantageous for control. However, the Contractor is responsible for delivering fine aggregate to the mixer within specification limits. When the amount passing on any sieve is outside the specification limits, the fine aggregate shall be immediately resampled and retested. If there is another failure on any sieve, the fact shall immediately reported to the Contracting Officer, concreting shall be stopped, and immediate steps taken to correct the grading.

3.11.1.2 Coarse Aggregate

At least once during each shift in which the concrete plant is operating, there shall be a sieve analysis in accordance with ASTM C 136 for each size of coarse aggregate. The location at which samples are taken may be selected by the Contractor as the most advantageous for production control.

However, the Contractor shall be responsible for delivering the aggregate to the mixer within specification limits. A test record of samples of aggregate taken at the same locations shall show the results of the current test as well as the average results of the five most recent tests including the current test. The Contractor may adopt limits for control coarser than the specification limits for samples taken other than as delivered to the mixer to allow for degradation during handling. When the amount passing any sieve is outside the specification limits, the coarse aggregate shall be immediately resampled and retested. If the second sample fails on any sieve, that fact shall be reported to the Contracting Officer. Where two consecutive averages of 5 tests are outside specification limits, the operation shall be considered out of control and shall be reported to the Contracting Officer. Concreting shall be stopped and immediate steps shall be taken to correct the grading.

3.11.2 Quality of Aggregates

Thirty days prior to the start of concrete placement, the Contractor shall perform all tests for aggregate quality required by ASTM C 33. In addition, after the start of concrete placement, the Contractor shall perform tests for aggregate quality at least every three months, and when the source of aggregate or aggregate quality changes. Samples tested after the start of concrete placement shall be taken immediately prior to entering the concrete mixer.

3.11.3 Scales, Batching and Recording

The accuracy of the scales shall be checked by test weights prior to start of concrete operations and at least once every three months. Such tests shall also be made as directed whenever there are variations in properties of the fresh concrete that could result from batching errors. Once a week the accuracy of each batching and recording device shall be checked during a weighing operation by noting and recording the required weight, recorded weight, and the actual weight batched. At the same time, the Contractor shall test and ensure that the devices for dispensing admixtures are operating properly and accurately. When either the weighing accuracy or batching accuracy does not comply with specification requirements, the plant shall not be operated until necessary adjustments or repairs have been made. Discrepancies in recording accuracies shall be corrected immediately.

3.11.4 Batch-Plant Control

The measurement of concrete materials including cementitious materials, each size of aggregate, water, and admixtures shall be continuously controlled. The aggregate weights and amount of added water shall be adjusted as necessary to compensate for free moisture in the aggregates. The amount of air-entraining agent shall be adjusted to control air content

within specified limits. A report shall be prepared indicating type and source of cement used, type and source of pozzolan used, amount and source of admixtures used, aggregate source, the required aggregate and water weights per cubic yard, amount of water as free moisture in each size of aggregate, and the batch aggregate and water weights per cubic yard for each class of concrete batched during each day's plant operation.

3.11.5 Concrete Mixture

- a. Air Content Testing. Air content tests shall be made when test specimens are fabricated. In addition, at least two tests for air content shall be made on randomly selected batches of each separate concrete mixture produced during each 8-hour period of concrete production. Additional tests shall be made when excessive variation in workability is reported by the placing foreman or Government inspector. Tests shall be made in accordance with ASTM C 231 for normal weight concrete and ASTM C 173 for lightweight concrete. Test results shall be plotted on control charts which shall at all times be readily available to the Government and shall be submitted weekly. Copies of the current control charts shall be kept in the field by testing crews and results plotted as tests are made. When a single test result reaches either the upper or lower action limit, a second test shall immediately be made. The results of the two tests shall be averaged and this average used as the air content of the batch to plot on both the air content and the control chart for range, and for determining need for any remedial action. The result of each test, or average as noted in the previous sentence, shall be plotted on a separate control chart for each mixture on which an "average line" is set at the midpoint of the specified air content range from paragraph Air Entrainment. An upper warning limit and a lower warning limit line shall be set 1.0 percentage point above and below the average line, respectively. An upper action limit and a lower action limit line shall be set 1.5 percentage points above and below the average line, respectively. The range between each two consecutive tests shall be plotted on a secondary control chart for range where an upper warning limit is set at 2.0 percentage points and an upper action limit is set at 3.0 percentage points. Samples for air content may be taken at the mixer, however, the Contractor is responsible for delivering the concrete to the placement site at the stipulated air content. If the Contractor's materials or transportation methods cause air content loss between the mixer and the placement, correlation samples shall be taken at the placement site as required by the Contracting Officer, and the air content at the mixer controlled as directed.
- b. Air Content Corrective Action. Whenever points on the control chart for percent air reach either warning limit, an adjustment shall immediately be made in the amount of air-entraining admixture batched. As soon as practical after each adjustment, another test shall be made to verify the result of the adjustment. Whenever a point on the secondary control chart for range reaches the warning limit, the admixture dispenser shall be recalibrated

to ensure that it is operating accurately and with good reproducibility. Whenever a point on either control chart reaches an action limit line, the air content shall be considered out of control and the concreting operation shall immediately be halted until the air content is under control. Additional air content tests shall be made when concreting is restarted.

- c. Slump Testing. In addition to slump tests which shall be made when test specimens are fabricated, at least four slump tests shall be made on randomly selected batches in accordance with ASTM C 143/C 143M for each separate concrete mixture produced during each 8-hour or less period of concrete production each day. Also, additional tests shall be made when excessive variation in workability is reported by the placing foreman or Government inspector. Test results shall be plotted on control charts which shall at all times be readily available to the Government and shall be submitted weekly. Copies of the current control charts shall be kept in the field by testing crews and results plotted as tests are made. When a single slump test reaches or goes beyond either the upper or lower action limit, a second test shall immediately be made. The results of the two tests shall be averaged and this average used as the slump of the batch to plot on both the control charts for slump and the chart for range, and for determining need for any remedial action. Limits shall be set on separate control charts for slump for each type of mixture. The upper warning limit shall be set at 1/2 inch below the maximum allowable slump specified in paragraph Slump in PART 1 for each type of concrete and an upper action limit line and lower action limit line shall be set at the maximum and minimum allowable slumps, respectively, as specified in the same paragraph. The range between each consecutive slump test for each type of mixture shall be plotted on a single control chart for range on which an upper action limit is set at 2 inches. Samples for slump shall be taken at the mixer. However, the Contractor is responsible for delivering the concrete to the placement site at the stipulated slump. If the Contractor's materials or transportation methods cause slump loss between the mixer and the placement, correlation samples shall be taken at the placement site as required by the Contracting Officer, and the slump at the mixer controlled as directed.
- d. Slump Corrective Action. Whenever points on the control charts for slump reach the upper warning limit, an adjustment shall immediately be made in the batch weights of water and fine aggregate. The adjustments are to be made so that the total water content does not exceed that amount allowed by the maximum w/c ratio specified, based on aggregates which are in a saturated surface dry condition. When a single slump reaches the upper or lower action limit, no further concrete shall be delivered to the placing site until proper adjustments have been made. Immediately after each adjustment, another test shall be made to verify the correctness of the adjustment. Whenever two consecutive individual slump tests, made during a period when there was no adjustment of batch weights, produce a point on the control chart

for range at or above the upper action limit, the concreting operation shall immediately be halted, and the Contractor shall take appropriate steps to bring the slump under control. Additional slump tests shall be made as directed.

- e. Temperature. The temperature of the concrete shall be measured when compressive strength specimens are fabricated. Measurement shall be in accordance with ASTM C 1064/C 1064M. The temperature shall be reported along with the compressive strength data.
- f. Strength Specimens. At least one set of test specimens shall be made, for compressive or strength as appropriate, on each different concrete mixture placed during the day for each 500 cubic yards or portion thereof of that concrete mixture placed each day. Additional sets of test specimens shall be made, as directed by the Contracting Officer, when the mixture proportions are changed or when low strengths have been detected. A truly random (not haphazard) sampling plan shall be developed by the Contractor and approved by the Contracting Officer prior to the start of construction. The plan shall assure that sampling is done in a completely random and unbiased manner. A set of test specimens for concrete with a 28-day specified strength per paragraph Strength Requirements in PART 1 shall consist of four specimens, two to be tested at 7 days and two at 28 days. Test specimens shall be molded and cured in accordance with ASTM C 31/C 31M and tested in accordance with ASTM C 39/C 39M for test cylinders and ASTM C 78 for test beams. Results of all strength tests shall be reported immediately to the Contracting Officer. Quality control charts shall be kept for individual strength "tests", ("test" as defined in paragraph Strength Requirements in PART 1) moving average of last 3 "tests" for strength, and moving average for range for the last 3 "tests" for each mixture. The charts shall be similar to those found in ACI 214.3R.

3.11.6 Inspection Before Placing

Foundations, construction joints, forms, and embedded items shall be inspected by the Contractor in sufficient time prior to each concrete placement in order to certify to the Contracting Officer that they are ready to receive concrete. The results of each inspection shall be reported in writing.

3.11.7 Placing

The placing foreman shall supervise placing operations, shall determine that the correct quality of concrete or grout is placed in each location as specified and as directed by the Contracting Officer, and shall be responsible for measuring and recording concrete temperatures and ambient temperature hourly during placing operations, weather conditions, time of placement, volume placed, and method of placement. The placing foreman shall not permit batching and placing to begin until it has been verified that an adequate number of vibrators in working order and with competent operators are available. Placing shall not be continued if any pile of concrete is inadequately consolidated. If any batch of concrete fails to

meet the temperature requirements, immediate steps shall be taken to improve temperature controls.

3.11.8 Vibrators

The frequency and amplitude of each vibrator shall be determined in accordance with COE CRD-C 521 prior to initial use and at least once a month when concrete is being placed. Additional tests shall be made as directed when a vibrator does not appear to be adequately consolidating the concrete. The frequency shall be determined while the vibrator is operating in concrete with the tachometer being held against the upper end of the vibrator head while almost submerged and just before the vibrator is withdrawn from the concrete. The amplitude shall be determined with the head vibrating in air. Two measurements shall be taken, one near the tip and another near the upper end of the vibrator head, and these results averaged. The make, model, type, and size of the vibrator and frequency and amplitude results shall be reported in writing. Any vibrator not meeting the requirements of paragraph Consolidation, shall be immediately removed from service and repaired or replaced.

3.11.9 Curing Inspection

- a. Moist Curing Inspections. At least once each shift, and not less than twice per day on both work and non-work days, an inspection shall be made of all areas subject to moist curing. The surface moisture condition shall be noted and recorded.
- b. Moist Curing Corrective Action. When a daily inspection report lists an area of inadequate curing, immediate corrective action shall be taken, and the required curing period for those areas shall be extended by 1 day.
- c. Membrane Curing Inspection. No curing compound shall be applied until the Contractor has verified that the compound is properly mixed and ready for spraying. At the end of each operation, the Contractor shall estimate the quantity of compound used by measurement of the container and the area of concrete surface covered, shall compute the rate of coverage in square feet per gallon, and shall note whether or not coverage is uniform.
- d. Membrane Curing Corrective Action. When the coverage rate of the curing compound is less than that specified or when the coverage is not uniform, the entire surface shall be sprayed again.

3.11.10 Cold-Weather Protection

At least once each shift and once per day on non-work days, an inspection shall be made of all areas subject to cold-weather protection. Any deficiencies shall be noted, corrected, and reported.

3.11.11 Reports

All results of tests or inspections conducted shall be reported informally as they are completed and in writing daily. A weekly report shall be

prepared for the updating of control charts covering the entire period from the start of the construction season through the current week. During periods of cold-weather protection, reports of pertinent temperatures shall be made daily. These requirements do not relieve the Contractor of the obligation to report certain failures immediately as required in preceding paragraphs. Such reports of failures and the action taken shall be confirmed in writing in the routine reports. The Contracting Officer has the right to examine all contractor quality control records.

-- End of Section --

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