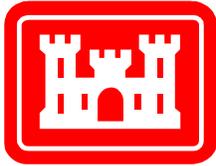


Memphis District

Invitation for Bid No. DACW66-00-B-0003



**US Army Corps
of Engineers®**

Project Title:

MAIN OUTLET DITCH, REACH 1A

Location:

**PHILLIPS COUNTY, ARKANSAS
HELENA AND VICINITY PROJECT
CONSTRUCTION**

**Construction Solicitation
and Specifications**

THIS IS A SMALL BUSINESS SET-ASIDE

Date: NOVEMBER 1999

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SOLICITATION, OFFER, AND AWARD (Construction, Alteration, or Repair)	1. SOLICITATION NO. DACW66-00-B-0003	2. TYPE OF SOLICITATION <input checked="" type="checkbox"/> SEALED BID (IFB) <input type="checkbox"/> NEGOTIATED (RFP)	3. DATE ISSUED 11/15/99	PAGE OF PAGES
	IMPORTANT - The "offer" section on the reverse must be fully completed by offeror.			

4. CONTRACT NO.	5. REQUISITION/PURCHASE REQUEST NO. W38XGR-9278-9184	6. PROJECT NO. DACW66-00-B-0003
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7. ISSUED BY U S ARMY ENGINEER DISTRICT, MEMPHIS CONTRACTING DIVISION (CEVM-CT) 167 NORTH MAIN STRET B202 MEMPHIS, TN 38103-1894	CODE W38XGR	8. ADDRESS OFFER TO ADDRESS SAME AS BLOCK 7. HAND DELIVERED BIDS RECEIVED IN ROOM 681, CLIFFORD DAVIS FEDERAL BUILDING, 167 NORTH MAIN STREET, MEMPHIS, TN
--	----------------	--

9. FOR INFORMATION CALL:	A. NAME E. ANN TUCKER	B. TELEPHONE NO. (Include area code) (NO COLLECT CALLS) (901) 544-0770
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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 work required is for Main Outlet Ditch, Reach 1A, Phillips County, Arkansas, Helena and Vicinity Project - Construction.

Description of Work:

The work consists of clearing and disposal of debris therefrom; channel excavation and disposal of excavated materials therefrom; installation of chain-link fence; guard rail; steel sheet piling, aggregate surfacing; stone protection to include bedding material and riprap; culvert removal and installation, and environmental protection.

The estimated value of the proposed work is between \$500,000.00 and \$1,000,000.00.

11. The Contractor shall begin performance within 10 calendar days and complete it within 180 calendar days after receiving
 award, notice to proceed. This performance period is mandatory, negotiable. (See Sec. 00800, Para. 1.1 .)

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 10
--	------------------------------

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 02:30 (hour) local time 12/16/99 (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) CAGE CODE : DUNS NO . CODE FACILITY CODE	15. TELEPHONE NO. (Include area code) 16. REMITTANCE ADDRESS (Include only if different than Item 14)
--	--

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

AMOUNTS

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

19. ACKNOWLEDGMENT OF AMENDMENTS

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

AMENDMENT NO.										
DATE										

20A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)	20B. SIGNATURE	20C. OFFER DATE
---	----------------	-----------------

AWARD (To be completed by Government)

21. ITEMS ACCEPTED:

22. AMOUNT	23. ACCOUNTING AND APPROPRIATION DATA
------------	---------------------------------------

24. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)	ITEM	25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO <input type="checkbox"/> 10 U.S.C. 2304(c) () <input type="checkbox"/> 41 U.S.C. 253(c) ()
--	------	--

26. ADMINISTERED BY CODE	27. PAYMENT WILL BE MADE BY
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CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE

28. NEGOTIATED AGREEMENT (contractor is required to sign this document and return _____ copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all work, 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.

29. AWARD (Contractor is not required to sign this document.) Your offer on this solicitation, is hereby accepted as to the items listed. This award consummates the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual document is necessary.

30A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN (Type or print)	31A. NAME OF CONTRACTING OFFICER (Type or print)
--	--

30B. SIGNATURE	30C. DATE	31B. UNITED STATES OF AMERICA BY	31C. AWARD DATE
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<u>ITEM</u>	<u>DESCRIPTION</u>	<u>ESTIMATED QUANTITY</u>	<u>U/M</u>	<u>U/P</u>	<u>AMOUNT</u>
-------------	--------------------	---------------------------	------------	------------	---------------

If a bid or modification to a bid based on unit prices is submitted and provides for a lump sum adjustment to the total estimated cost, the application of the lump sum adjustment to each unit price, including lump sum units, in bid schedule must be stated, or, if it is not stated, the bidder agrees that the lump sum adjustment shall be applied on a pro rata basis to every unit price in the bid schedule.

Bidders are cautioned to read the Contract Clause entitled "Required Central Contractor Registration" located in Section 00700.

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		:	Goals for female participation
for each trade		:	for each trade
SMSA Counties	32.3	:	
Non-SMSA Counties	26.5	:	6.9

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

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

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

(1) Name, address and telephone number of the subcontractor;

(i) Employer identification number of the subcontractor:

(2) Estimated dollar amount of the subcontract;

(3) Estimated starting and completion dates of the subcontract; and

(4) Geographical area in which the subcontract is to be performed.

e. As used in this Notice, and in the contract resulting from this Solicitation, the “covered area” is Economic Area 055, Memphis, TN, as follows:

SMSA Counties:

4920 Memphis, TN-AR-MS-----32.3
AR Crittenden; MS DeSoto, TN Shelby, TN Tipton

Non-SMSA Counties.....26.5

AR Clay; AR Craighead; AR Cross, AR Greene; AR Lawrence; AR Lee,
AR Mississippi; AR Phillips, AR Poinsett; AR Randolph; AR St. Francis;
MS Alcorn; MS Benton; MS Bolivar; MS Clahoun; MS Carroll;
MS Chickasaw; MS Clay; MS Coahoma; MS Grenada; MS Itawamba;
MS Lafayette; MS Lee; MS Leflore; MS Marshall; MS Monroe;
MS Montgomery; MS Panola; MS Pontotoc; MS Prentiss; MS Quitman;
MS Sunflower; MS Tallahatchie; MS Tate; MS Tippah; MS Tishomingo;
MS Union; MS Washington; MS Webster; MS Yalobusha; MO Dunklin;
MO New Madrid; MO Pemiscot, TN Benton; TN Carroll, TN Chester;
TN Crockett; TN Decator; TN Dyer; TN Fayette, TN Gibson; TN Hardeman
TN Hardin; TN Haywood; TN Henderson; TN Henry; TN Lake;
TN Lauderdale; TN McNairy; TN Madison; TN Obion;
TN Weakley.

(FAR 52.222-23)

PLANT AND EQUIPMENT SCHEDULE

[TO BE ATTACHED TO BID FORM]

AVAILABLE PLANT TO BE USED

* _____

No.	TYPE	CAPACITY	MANUFACTURER	AGE & CONDITON	LOCATION
			* _____		
			* _____		

*PROVIDE SEPARATE TABLE FOR EACH TYPE OF EQUIPMENT SUCH AS CONCRETE PLANT, MATERIAL HANDLING, HAULING, ETC. USE ADDITIONAL PAGE IF NECESSARY.

ENG FORM 1619-R

General Decision Number AR990044

General Decision Number AR990044 Superseded General Decision No.
AR980044

State: Arkansas
Construction Type:
HEAVY
SEWER AND WATER LINE
County(ies):

ARKANSAS	GARLAND	OUACHITA
ASHLEY	GRANT	PERRY
BAXTER	GREENE	PHILLIPS
BENTON	HEMPSTEAD	PIKE
BOONE	HOT SPRING	POINSETT
BRADLEY	HOWARD	POLK
CALHOUN	INDEPENDENCE	POPE
CARROLL	IZARD	PRAIRIE
CHICOT	JACKSON	RANDOLPH
CLARK	JOHNSON	SCOTT
CLAY	LAFAYETTE	SEARCY
CLEBURNE	LAWRENCE	SEBASTIAN
CLEVELAND	LEE	SEVIER
COLUMBIA	LINCOLN	SHARP
CONWAY	LITTLE RIVER	ST FRANCIS
CRAIGHEAD	LOGAN	STONE
CRAWFORD	MADISON	UNION
CRITTENDEN	MARION	VAN BUREN
CROSS	MILLER	WASHINGTON
DALLAS	MISSISSIPPI	WHITE
DESHA	MONROE	WOODRUFF
DREW	MONTGOMERY	YELL
FRANKLIN	NEVADA	
FULTON	NEWTON	

HEAVY CONSTRUCTION PROJECTS (Includes Sewer and Water Line
Construction Projects)

Modification Number Publication Date
0 03/12/1999

COUNTY(ies):

ARKANSAS	GARLAND	OUACHITA
ASHLEY	GRANT	PERRY
BAXTER	GREENE	PHILLIPS
BENTON	HEMPSTEAD	PIKE
BOONE	HOT SPRING	POINSETT
BRADLEY	HOWARD	POLK
CALHOUN	INDEPENDENCE	POPE
CARROLL	IZARD	PRAIRIE
CHICOT	JACKSON	RANDOLPH
CLARK	JOHNSON	SCOTT
CLAY	LAFAYETTE	SEARCY
CLEBURNE	LAWRENCE	SEBASTIAN
CLEVELAND	LEE	SEVIER
COLUMBIA	LINCOLN	SHARP
CONWAY	LITTLE RIVER	ST FRANCIS

CRAIGHEAD	LOGAN	STONE
CRAWFORD	MADISON	UNION
CRITTENDEN	MARION	VAN BUREN
CROSS	MILLER	WASHINGTON
DALLAS	MISSISSIPPI	WHITE
DESHA	MONROE	WOODRUFF
DREW	MONTGOMERY	YELL
FRANKLIN	NEVADA	
FULTON	NEWTON	
SUAR2001B	01/19/1990	

	Rates	Fringes
BRICKLAYERS	7.20	
CARPENTERS	7.20	
CONCRETE FINISHERS	7.20	
ELECTRICIANS	8.75	
IRONWORKERS:		
Structural	6.30	
Reinforcing	5.45	
LABORERS:		
Air tool operators	5.15	
Asphalt heater operators	5.15	
Asphalt rakers	5.85	
Chain saw operators	5.15	
Checker graders	5.45	
Concrete joint sealers	5.15	
Concrete saw operators	5.15	
Formsetters	5.45	
Laborers	5.15	
Pipelayers	5.45	
Powdermen	6.40	
Vibratormen	5.15	
PAINTERS	6.20	
PILE DRIVER LEADMEN	6.20	
POWER EQUIPMENT OPERATORS:		
Aggregate Spreader operators	5.80	
Asphalt plant firemen	5.15	
Asphalt plantdriver operators	5.15	
Batch plant operators	5.80	
Bulldozer Operators:		
Finish	6.90	
Rough	5.65	
Bull Float operators	5.65	
Concrete curing machine operators	5.65	
Concrete mixer operators:		
Less than 5 sacks	5.15	
5 sacks and over	6.20	
Backhoe Operator - Rubber tired		
(1 yard or less)	6.10	
Cherry picker operators	6.10	
Concrete paver operators	6.70	
Concrete sperader operators	6.70	
Crane, Derrick, Dragline,		
Shovel, Backhoe, Operators		
1-1/2 yards or less	6.70	
over 1-1/2 yards	7.20	
Crusher operators	5.65	
Distributor operators	5.65	

Drill operators (Wagon or truck)	5.65
Elevating Grader operators	6.70
Euclid or like equipment operator (Bottom or end dump)	5.25
Finishing Machine Operators	6.10
Flaggers	5.15
Forkliff operators	5.15
Form grader operators	5.15
Front end loader operators	
Finish	6.70
Rough	5.65
Hdro Seeder operators	5.15
Mechanics	6.90
Motor Patrol Operators:	
Finish	6.90
Rough	5.65
Mulching machine operators	5.15
Oilers and Greasers	5.45
Piledriver operators	6.20
Power broom operators	5.15
Pug mill operators	5.15
Roller Operators (self propelled)	5.25
Scraper Operators:	
Finish	6.90
Rough	5.65
Sod slicing machine operators	5.15
Stabilizer mixing machine operators	5.65
Tractor operators (crawler type)	5.15
Tractor operators (farm and sheel)	5.15
Tractor operators-wheel type (with attach.-1 yd. or under)	5.55
Trenching Machine operators	5.55
STONEMASONS	7.20
TRUCK DRIVERS:	
Distributor truck drivers	5.45
Semi-trailer	5.45
Lowboy drivers	5.65
Transit mix truck drivers	5.45
Truck Drivers (heavy-maximum pay load in excess of 3,000 lbs.)	5.15
Truck Drivers (light-maximum pay load 3,000 lbs.)	5.15
WELL DRILLERS	6.90

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

(29 CFR 5.5(a)(1)(v)).

In the listing above, the "SU" designation means that rates listed under that 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, D. C. 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, D. C. 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, D. C. 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

SECTION 00100
Instructions to Bidders

CLAUSES INCORPORATED BY REFERENCE:

52.214-5000 Apparent Clerical Mistakes MAY 1999

CLAUSES INCORPORATED BY FULL TEXT

52.0-4048 QUANTITY ESTIMATES

Estimates of quantities involved in certain items of work for which bids are being solicited on a lump sum or job basis have been made for the use of the Government. Copies of these quantity estimates may be obtained from the U S Army Engineer District Memphis, 167 North Main Street, Room 762, Memphis, Tennessee 38103-1894, telephone 901/544-3236. It is to be expressly understood that the accuracy of these estimates is in no way warranted and that the furnishing of this information to a bidder will not relieve him of his responsibility to estimate the quantities involved. It is further to be expressly understood that in no case will such estimate be used as a basis of claim against the Government.

52.0-4049 CONDITIONS AFFECTING THE WORK

Bidders should visit the site and take such other steps as may be reasonably necessary to ascertain the nature and location of the work, and the general and local conditions which can affect the work or the cost thereof. Failure to do so will not relieve bidders from responsibility for estimating properly the difficulty or cost of successfully performing the work. The Government will assume no responsibility for any understanding or representations concerning conditions made by any of its officers or agents prior to the execution of the contract, unless included in the Solicitation, the specifications, or related documents.

52.0-4055 NEGOTIATIONS AFTER SEALED BIDDING

(a) This clause applies if after bid opening the Contracting Officer determines that all otherwise acceptable bids received are at unreasonable prices, or only one bid is received and the Contracting Officer cannot determine the reasonableness of the bid price, or no responsive bid has been received from a responsible bidder; or the bids were not independently arrived at in open competition, were collusive, or were submitted in bad faith.

(b) The Government has the option to reject all bids received in response to the sealed bid advertisement and initiate negotiation. Negotiations will include soliciting offers from each responsible bidder that submits a bid in response to the solicitation.

(c) If after bid opening the Contracting Officer determines under (a) above that negotiations are in the best interest of the Government, the following steps will be followed:

(1) An amendment to the sealed bid advertisement will be issued to each responsible bidder changing the solicitation number to a request for proposal number. The amendment will also make any necessary changes to the scope of work.

(2) A cover letter signed by the negotiator will accompany the amendment explaining the procedures to be followed during negotiations.

(3) In the event there is only one responsible bidder under the initial sealed bid solicitation, cost or pricing data requirements set forth in FAR 15.804 will apply as will clause FAR 52.215-2, "Audit and Records - Negotiation".

52.0-4058 PROGRAM DATA

AUTHORITY: The work provided for herein is authorized by the Flood Control Act approved 15 JUN 1936, as amended.

52.0-4060 REVISION AND AMENDMENT TO SOLICITATION FOR BIDS

The right is reserved, as the interest of the Government may require, to revise or amend the specifications or drawings or both prior to the date set for opening bids. Such revisions and

amendments, if any, will be announced by an amendment or amendments to this Solicitation for Bids. If revisions and amendments are of a nature which requires material changes in quantities or prices bid or both, the date set for opening bids may be postponed by such number of days as in the opinion of the issuing officer will enable bidders to revise their bids. In such cases, the amendment will include an announcement of new date for opening bids.

52.0-4074 CERTIFICATE OF COMPETENCY (APR 1993)

- (a) In the event of a determination of nonresponsibility on a small business offeror, the Contracting Officer will -
 - (1) Notify the Offeror, in writing, of the determination and of the Offeror's right, under Section 8(b)(7) of the Small Business Act, to request that the Small Business Administration (SBA) make a determination of the Offeror's responsibility under the Certificate of Competency Program.
 - (2) Withhold award until the Offeror's response is received or 14 calendar days from receipt of the notice by the Offeror.
 - (3) Upon timely receipt of an affirmative response from the Offeror, refer the matter to the SBA.
 - (4) Upon receipt of a negative response from the Offeror, or if a timely response is not received, award to another offeror.
- (b) The Offeror shall notify the Contracting Officer, in writing, within 14 days of receipt of a notification of a nonresponsibility determination, as to whether or not it desires a request for an SBA determination of responsibility.

(DFARS 252.219-7009)

52.0-4080 (FAR 52.236-27) SITE VISIT (CONSTRUCTION) (ALTERNATE I) (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, bidders are urged and expected to inspect the site where the work will be performed.

(b) Two organized site visits have been scheduled for December 2 and December 9, 1999.

(c) Bidders desiring a site visit shall contact the Area Engineer at least one day prior to the scheduled site visit.

NAME: Donald R. Tutor

Area Engineer

ADDRESS: Wynne Area Office
Bennie House Center
Highway 1 North
P. O. Box 729
Wynne, Arkansas 72396-0729

TELEPHONE: 901/544-3851 or 870/238-7983
COLLECT TELEPHONE CALLS WILL NOT BE ACCEPTED.
(End of Provision)

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 (AUG 1998)

(a) Copies of specifications, standards, and data item descriptions cited in this solicitation may be obtained for a fee 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) 697-2667/2179, Facsimile (215) 697-1462.

(b) Order forms, pricing information, and customer support information may be obtained-

(1) By telephone at (215) 697-2667/2179; or

(2) Through the DoDSSP Internet site at <http://www.dodssp.daps.mil>.

52.214-1 SOLICITATION DEFINITIONS--SEALED BIDDING (JUL 1987)

"Government" means United States Government.

"Offer" means "bid" in sealed bidding.

"Solicitation" means an invitation for bids in sealed bidding.

(End of provision)

52.214-3 AMENDMENTS TO INVITATIONS FOR BIDS (DEC 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.

(End of provision)

52.214-4 FALSE STATEMENTS IN BIDS (APR 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.

(End of provision)

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.

52.214-6 EXPLANATION TO PROSPECTIVE BIDDERS (APR 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.

(End of provision)

52.214-7 LATE SUBMISSIONS, MODIFICATIONS, AND WITHDRAWALS OF BIDS (MAY 1997)

(a) Any bid received at the office designated in the solicitation after the exact time specified for receipt will not be considered unless it is received before award is made and it--

(1) Was sent by registered or certified mail not later than the fifth calendar day before the date specified for receipt of bids (e.g., a bid submitted in response to a solicitation requiring receipt of bids by the 20th of the month must have been mailed by the 15th);

(2) Was sent by mail (or telegram or facsimile, if authorized) or hand-carried (including delivery by a commercial carrier) if it is determined by the Government that the late receipt was due primarily to Government mishandling after receipt at the Government installation;

(3) Was sent by U.S. Postal Service Express Mail Next Day Service-Post Office To Addressee, not later than 5:00 p.m. at the place of mailing two working days prior to the date specified for receipt of bids. The term "working days" excludes weekends and U.S. Federal holidays; or

(4) Was transmitted through an electronic commerce method authorized by the solicitation and 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.

(b) Any modification or withdrawal of a bid is subject to the same conditions as in paragraph (a) of this provision.

(c) The only acceptable evidence to establish the date of mailing of a late bid, modification, or withdrawal sent either by registered or certified mail is the U.S. or Canadian Postal Service postmark both on the envelope or wrapper and on the original receipt from the U.S. or Canadian Postal Service. Both postmarks must show a legible date or the bid, modification, or withdrawal shall be processed as if mailed late. "Postmark" means a printed, stamped, or otherwise placed impression (exclusive of a postage meter machine impression) that is readily identifiable without further action as having been supplied and affixed by employees of the U.S. or Canadian Postal Service on the date of mailing. Therefore, bidders should request the postal clerk to place a legible hand cancellation bull's-eye postmark on both the receipt and the envelope or wrapper.

(d) The only acceptable evidence to establish the time of receipt at the Government installation is the time/date stamp of that installation on the bid wrapper or other documentary evidence of receipt maintained by the installation.

(e) The only acceptable evidence to establish the date of mailing of a late bid, modification, or withdrawal sent by U.S. Postal Service Express Mail Next Day Service-Post Office to Addressee is the date entered by the post office receiving clerk on the "Express Mail Next Day Service-Post Office to Addressee" label and the postmark on the envelope or wrapper and on the original receipt from the U.S. Postal Service. "Postmark" has the same meaning as defined in paragraph (c) of this provision, excluding postmarks of the Canadian Postal Service. Therefore, bidders should request the postal clerk to place a legible hand cancellation bull's-eye postmark on both the receipt and the envelope or wrapper.

(f) Notwithstanding paragraph (a) of this provision, 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.

(g) Bids may be withdrawn by written notice or telegram (including mailgram) received at any time before the exact time set for receipt of bids. If the solicitation 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 entitled "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.

(h) If an emergency or unanticipated event interrupts normal Government processes so as to cause postponement of the scheduled bid opening, and urgent Government requirements preclude amendment of the solicitation or other notice of an extension of the opening date, 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.

52.214-18 PREPARATION OF BIDS--CONSTRUCTION (APR 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.

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 or 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, or if it is so unbalanced as to be tantamount to allowing an advance payment.

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)

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)

52.216-1 TYPE OF CONTRACT (APR 1984)

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

(End of clause)

52.228-1 BID GUARANTEE (SEP 1996)

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

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

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

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

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

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.

52.0-4019 PREAWARD INFORMATION

Each bidder shall, upon request of the Contracting Officer, furnish

a statement of whether he is now or ever has been engaged in any work similar to that covered by the specifications herein, the dollar value thereof, the year in which such work was performed, and the manner of its execution and giving such other information as will tend to show the bidder's ability to prosecute the required work. The "such other information" referred to above shall include but is not limited to the following:

(a) The name and address of the office or firm under which such similar work was performed.

(b) A list of key personnel available for the instant project and their qualifications.

(c) A copy of bidder's latest financial statement, including the names of banks or other financial institutions with which the bidder conducts business. If the financial statement is more than 60 days old, a certificate should be attached stating that financial condition is substantially the same, or if not the same, the changes that have taken place. Such statement will be treated as confidential.

(d) A list of present commitments, including the dollar value thereof, and name of office under which work is being performed.

52.225-12 NOTICE OF BUY AMERICAN ACT REQUIREMENT--
CONSTRUCTION MATERIALS (MAY 1997)

(a) Offerors are required to comply with the requirements of Federal Acquisition Regulation (FAR) clause 52.225-5, Buy American Act--Construction Materials, of this solicitation. The terms "construction material" and "domestic construction material," as used in this provision, have the meanings set forth in FAR clause 52.225-5.

(b) Offerors should request a determination regarding the inapplicability of the Buy American Act in time to allow determination before submission of offers. For evaluation of a request for a determination regarding the inapplicability of the requirements of the Buy American Act prior to the time set for receipt of offers, the information and applicable supporting data required by paragraphs (c) and (d) of FAR clause 52.225-5 shall be included in the request. If an offeror has not requested a determination regarding

the inapplicability of the Buy American Act prior to submission of its offer, or has not received a response to a request made prior to submission of its offer, the information and supporting data shall be included in the offer.

(c) Evaluation of offers. (1) For evaluation of offers, (unless agency regulations specify a higher percentage) the Government will add to the offered price 6 percent of the cost of any foreign construction material proposed for exception from the requirements of the Buy American Act based on claimed unreasonable cost of domestic construction materials in accordance with paragraph (b)(3)(i) of FAR clause 52.225-5.

(2) If the evaluation of offers results in a tie between an offer including such foreign construction material excepted on the basis of unreasonable cost, as evaluated, and an offer including solely domestic construction material or other foreign construction material listed in the solicitation at paragraph (b)(2) of FAR clause 52.225-5, or subsequently excepted in accordance with paragraphs (b)(3)(ii) or (iii) of FAR clause 52.225-5, award shall be made to the offeror that submitted the latter offer.

(d) Alternate offers. (1) When an offer includes foreign construction material not listed by the Government in the solicitation at paragraph (b)(2) of FAR clause 52.225-5, offerors also may submit alternate offers based on use of equivalent domestic construction material.

(2) If alternate offers are submitted, a separate Standard Form 1442 shall be submitted for each alternate offer, and a separate price comparison table, prepared in accordance with paragraphs (c) and (d) of FAR clause 52.225-5, shall be submitted for each offer that is based on the use of any foreign construction material for which the Government has not yet determined an exception to apply.

(3) If the Government determines that a particular exception requested under paragraph (c) of FAR clause 52.225-5 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.

(i) In sealed bid procurements, any offer based on use of that particular foreign construction material shall be rejected as nonresponsive.

(ii) In negotiated procurements, any offer based on use of that particular foreign construction material may not be accepted unless revised during negotiations.

52.233-2 SERVICE OF PROTEST (AUG 1996)

(a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO), shall be served on the Contracting Officer

(addressed as follows) by obtaining written and dated acknowledgment of receipt from

Chief, Contracting Division
ATTN: CEMVM-CT Room 681
Department of the Army
Memphis District, Corps of Engineers
167 North Main Street B202
Memphis, TN 38103-1894

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

(c) In this procurement, you may not protest to the GSBCA because of the nature of the supplies or services being procured. (Contracting Officer shall strike the word "not" where the GSBCA is a correct forum.)

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

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at these addresses:

<http://www.arnet.gov/far>
<http://farsite.hill.af.mil>
<http://www.dtic.mil/dfars>

(End of provision)

SECTION 00600
Representations & Certifications

CLAUSES INCORPORATED BY FULL TEXT

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 of 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 offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contradictory to subparagraphs (a)(1) through (a)(3) above; or

(2) (i) Has been authorized, in writing, to act as an 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.

(End of clause)

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, shall be subject to a civil penalty of not less than \$10,000, and not more than \$100,000, for each such failure.

(End of provision)

52.204-3 TAXPAYER IDENTIFICATION (OCT 1998)

(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)

52.209-5 CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS (MAR 1996)

(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 subdivision (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)

**52.219-1 SMALL BUSINESS PROGRAM REPRESENTATIONS (OCT 1998)
ALTERNATE I (OCT 1998) & ALTERNATE II (JAN 1999)**

(a)(1) The standard industrial classification (SIC) code for this acquisition is 1629.

(2) The small business size standard is \$17,000,000.00.

(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 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 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.

(c) Definitions. "Joint venture," for purposes of a small disadvantaged business (SDB) set-aside or price evaluation preference (as prescribed at 13 CFR 124.321), is a concern that is owned and controlled by one or more socially and economically disadvantaged individuals entering into a joint venture agreement with one or more business concerns and is considered to be affiliated for size purposes with such other concern(s). The combined annual receipts or employees of the concerns entering into the joint venture must meet the applicable size standard corresponding to the SIC code designated for the contract. The majority of the venture's earnings must accrue directly to the socially and economically disadvantaged individuals in the SDB concern(s) in the joint venture. The percentage of the ownership involvement in a joint venture by disadvantaged individuals must be at least 51 percent.

"Small business concern," as used in this provision, 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.

"Small disadvantaged business concern," as used in this provision, means a small business concern that (1) is at least 51 percent unconditionally owned by one or more individuals who are both socially and economically disadvantaged, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one or more socially and economically disadvantaged individuals, and (2) has its management and daily business controlled by one or more such individuals. This term also means a small business concern that is at least 51 percent unconditionally owned by an economically disadvantaged Indian tribe or Native Hawaiian Organization, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one or more of these entities, which has its management and daily business controlled by members of an

economically disadvantaged Indian tribe or Native Hawaiian Organization, and which meets the requirements of 13 CFR Part 124.

"Woman-owned small business concern," as used in this provision, means a small business concern--

(1) Which 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 or small disadvantaged business concern in order to obtain a contract to be awarded under the preference programs established pursuant to sections 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.

(4) (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.

(5) [Complete only if 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 {time} is, {time} 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 place of ownership, 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 {time} is, {time} is not a joint venture that complies with the requirements of 13 CFR part 126, and the representation in paragraph (b)(5)(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.

(End of provision)

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 area 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.

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

The offeror represents that --

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

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

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

(End of provision)

52.223-1 CLEAN AIR AND WATER CERTIFICATION (APR 1984)

The Offeror certifies that --

(a) Any facility to be used in the performance of this proposed contract is, is not listed on the Environmental Protection Agency List of Violating Facilities;

(b) The Offeror will immediately notify the Contracting Officer, before award, of the receipt of any communication from the Administrator, or a designee, of the Environmental Protection Agency, indicating that any facility that the Offeror proposes to use for the performance of the contract is under consideration to be listed on the EPA List of Violating Facilities; and

(c) The Offeror will include a certification substantially the same as this certification, including this paragraph (c), in every nonexempt subcontract.

(End of clause)

52.223-13 CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING (OCT 1996)

(a) Submission of this certification is a prerequisite for making or entering into this contract imposed by Executive Order 12969, August 8, 1995.

(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 under section 313(c) of EPCRA, 42 U.S.C. 11023(c);

(ii) 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);

(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 Standard Industrial Classification Code (SIC) designations 20 through 39 as set forth in FAR section 19.102 of the Federal Acquisition Regulation; or

(v) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.

252.209-7001 DISCLOSURE OF OWNERSHIP OR CONTROL BY THE GOVERNMENT OF A TERRORIST COUNTRY (MAR 1998)

(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 such 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."

If the government of a terrorist country has a significant interest in the Offeror or a subsidiary of the Offeror, the Offeror shall disclose such interest in an attachment to its offer. 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)

52.204-6 DATA UNIVERSAL NUMBERING SYSTEM (DUNS) NUMBER (APR 98)

(a) Contractor identification is essential for complying with statutory contract reporting requirements. Therefore, the offeror is requested to enter, in the block with its name and address on the Standard Form 33 or similar document, the annotation "DUNS" followed by the DUNS number which identifies the offeror's name and address exactly as stated in the offer.

(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.dbisna.com/dbis/customer/custlist.htm>. If an offeror is unable to locate a local service center, it may send an e-mail to Dun and Bradstreet at globalinfo@dbisma.com.

52.219-19 SMALL BUSINESS CONCERN REPRESENTATION FOR THE SMALL BUSINESS COMPETITIVENESS DEMONSTRATION PROGRAM (JAN 1997)

(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 standard industrial classification code assigned to a contracting opportunity.

(b) [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.] 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 Avg. 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

(End of provision)

52.222-21 PROHIBITION OF SEGREGATED 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)

252.204-7001 COMMERCIAL AND GOVERNMENT ENTITY (CAGE) CODE REPORTING (DEC 1991)

(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 Services Center (DLSC). 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 DLSC; and (3) Notify the Contractor of its assigned CAGE code.

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

(End of clause)

52.0-4031 CORPORATE CERTIFICATION

IF A BIDDER IS A CORPORATION OR IF CORPORATION IS PARTICIPATING IN A JOINT VENTURE, PLEASE COMPLETE THE FOLLOWING CERTIFICATION:

I, _____, certify that I am secretary of the corporation named as Contractor herein; that _____ who signed this contract on behalf of the Contractor; was then _____ of said corporation; that said contract was duly signed for and on behalf of said corporation by authority of its governing body and is within the scope of its corporate powers.

(CORPORATE SEAL)

(Secretary)

IF A CORPORATION IS PARTICIPATING AS A JOINT VENTURE, ITS SECRETARY MUST SUBMIT A CERTIFICATE STATING THE CORPORATION IS AUTHORIZED TO PARTICIPATE.

**SECTION 00700
Contract Clauses**

CLAUSES INCORPORATED BY REFERENCE:

52.202-1 Alt I	Definitions (Oct 1995) –Alternate I	APR 1984
52.203-3	Gratuities	APR 1984
52.203-5	Covenant Against Contingent Fees	APR 1984
52.203-7	Anti-Kickback Procedures	JUL 1995
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity	JAN 1997
52.203-10	Price Or Fee Adjustment For Illegal Or Improper Activity	JAN 1997
52.203-12	Limitation On Payments To Influence Certain Federal Transactions	JUN 1997
52.204-4	Printing/Copying Double-Sided on Recycled Paper	JUN 1996
52.209-6	Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, or Proposed for Debarment	JUL 1995
52.211-18	Variation in Estimated Quantity	APR 1984
52.214-26	Audit and Records--Sealed Bidding	OCT 1997
52.214-27	Price Reduction for Defective Cost or Pricing Data - Modifications - Sealed Bidding	OCT 1997
52.214-28	Subcontracting Cost Or Pricing Data--Modifications-- Sealed Bidding	OCT 1997
52.219-6	Notice Of Total Small Business Set-Aside	JUL 1996
52.219-8	Utilization of Small Business Concerns	JAN 1999
52.219-14	Limitations On Subcontracting	DEC 1996
52.222-3	Convict Labor	AUG 1996
52.222-4	Contract Work Hours and Safety Standards Act - Overtime Compensation	JUL 1995
52.222-6	Davis Bacon Act	FEB 1995
52.222-7	Withholding of Funds	FEB 1988
52.222-8	Payrolls and Basic Records	FEB 1988
52.222-9	Apprentices and Trainees	FEB 1988
52.222-10	Compliance with Copeland Act Requirements	FEB 1988
52.222-11	Subcontracts (Labor Standards)	FEB 1988
52.222-12	Contract Termination-Debarment	FEB 1988
52.222-13	Compliance with Davis-Bacon and Related Act Regulations.	FEB 1988
52.222-14	Disputes Concerning Labor Standards	FEB 1988
52.222-15	Certification of Eligibility	FEB 1988
52.222-26	Equal Opportunity	FEB 1999
52.222-27	Affirmative Action Compliance Requirements for	FEB 1999

	Construction	
52.222-35	Affirmative Action For Disabled Veterans And Veterans of the Vietnam Era	APR 1998
52.222-36	Affirmative Action For Workers With Disabilities	JUN 1998
52.222-37	Employment Reports On Disabled Veterans And Veterans Of The Vietnam Era	JAN 1999
52.223-2	Clean Air And Water	APR 1984
52.223-6	Drug Free Workplace	JAN 1997
52.223-14	Toxic Chemical Release Reporting	OCT 1996
52.225-11	Restrictions On Certain Foreign Purchases	AUG 1998
52.227-1	Authorization and Consent	JUL 1995
52.227-2	Notice And Assistance Regarding Patent And Copyright Infringement	AUG 1996
52.227-4	Patent Indemnity-Construction Contracts	APR 1984
52.229-3	Federal, State And Local Taxes	JAN 1991
52.232-5	Payments under Fixed-Price Construction Contracts	MAY 1997
52.232-17	Interest	JUN 1996
52.232-23	Assignment Of Claims	JAN 1986
52.233-1	Disputes	DEC 1998
52.233-3	Protest After Award	AUG 1996
52.236-2	Differing Site Conditions	APR 1984
52.236-3	Site Investigation and Conditions Affecting the Work	APR 1984
52.236-5	Material and Workmanship	APR 1984
52.236-6	Superintendence by the Contractor	APR 1984
52.236-8	Other Contracts	APR 1984
52.236-9	Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements	APR 1984
52.236-10	Operations and Storage Areas	APR 1984
52.236-11	Use and Possession Prior to Completion	APR 1984
52.236-12	Cleaning Up	APR 1984
52.236-13	Alt I Accident Prevention (Nov 1991) - Alternate I	NOV 1991
52.236-15	Schedules for Construction Contracts	APR 1984
52.236-21	Specifications and Drawings for Construction	FEB 1997
52.236-26	Preconstruction Conference	FEB 1995
52.242-13	Bankruptcy	JUL 1995
52.242-14	Suspension of Work	APR 1984
252.227-7033	Rights in Shop Drawings	APR 1966
252.223-7001	Hazard Warning Labels	DEC 1991
252.219-7003	Small, Small Disadvantaged and Women-Owned Small Business Subcontractors Plan (DOD Contracts)	APR 1996
252.201-7000	Contracting Officer's Representative	DEC 1991
52.248-3	Alt I Value Engineering-Construction (Mar 1989) - Alternate I	APR 1989
52.245-4	Government-Furnished Property (Short Form)	APR 1984
52.245-2	Government Property (Fixed Price Contracts)	DEC 1989
52.228-14	Irrevocable Letter of Credit	OCT 1997
52.228-12	Prospective Subcontractor Requests for Bonds	OCT 1995

52.228-11	Pledges Of Assets	FEB 1992
52.228-2	Additional Bond Security	OCT 1997
52.226-1	Utilization Of Indian Organizations And Indian-Owned Economic Enterprises	MAY 1999
52.223-3	Hazardous Material Identification And Material Safety Data	JAN 1997
52.219-16	Liquidated Damages-Subcontracting Plan	JAN 1999
52.219-9 Alt I	Small Business Subcontracting Plan (Jan 1999) Alternate I	JAN 1999
52.246-12	Inspection of Construction	AUG 1996
52.249-2 Alt I	Termination for Convenience of the Government (Fixed-Price) (Sep 1996) - Alternate I	SEP 1996
52.249-10	Default (Fixed-Price Construction)	APR 1984
252.203-7001	Prohibition On Persons Convicted of Fraud or Other Defense-Contract-Related Felonies	MAR 1999
252.204-7004	Required Central Contractor Registration	MAR 1998
252.209-7004	Subcontracting With Firms That Are Owned or Controlled By The Government of a Terrorist Country	MAR 1998
252.223-7004	Drug Free Work Force	SEP 1988
252.231-7000	Supplemental Cost Principles	DEC 1991
252.236-7000	Modification Proposals-Price Breakdown	DEC 1991
252.243-7001	Pricing Of Contract Modifications	DEC 1991

CLAUSES INCORPORATED BY FULL TEXT

52.225-5 BUY AMERICAN ACT--CONSTRUCTION MATERIALS (JUNE 1997)

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

"Components," means those articles, materials, and supplies incorporated directly into construction materials.

"Construction material," means an article, material, or supply brought to the construction site for incorporation into the building or work. Construction material also includes an item brought to the site pre-assembled from articles, materials, and supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, which are discrete systems incorporated into a public building or work and which are produced as a complete system, shall be evaluated as a single and distinct construction material regardless of when or how the individual parts or components of such systems are delivered to the construction site.

"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 as the construction materials determined to be unavailable pursuant to subparagraph 25.202(a)(2) of the Federal Acquisition Regulation (FAR) shall be treated as domestic.

(b) (1) The Buy American Act (41 U.S.C. 10a-10d) requires that only domestic construction material be used 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 excepted construction material or components listed by the Government as follows:

NONE

(3) Other foreign construction material may be added to the list in paragraph (b)(2) of this clause if the Government determines that--

(i) The cost would be unreasonable (the cost of a particular domestic construction material shall be determined to be unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent, unless the agency head determines a higher percentage to be appropriate);

(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 or a satisfactory quality.

(4) The Contractor agrees that only domestic construction material will be used by the Contractor, subcontractors, material men, and suppliers in the performance of this contract, except for foreign construction materials, if any, listed in paragraph (b)(2) of this clause.

(c) Request for determination. (1) Contractors requesting to use foreign construction material under paragraph (b)(3) of this clause shall provide adequate information for Government evaluation of the request for a determination regarding the inapplicability of the Buy American Act. Each submission shall include a description of the foreign and domestic construction materials, including unit of measure, quantity, price, time of delivery or availability, location of the construction project, name and address of the proposed contractor, and a detailed justification of the reason for use of foreign materials cited in accordance with paragraph (b)(3) of this clause. A submission 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. 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.)

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

(3) If the Government does not determine that an exception to the Buy American Act applies, the use of that particular foreign construction material will be a failure to comply with the Act.

(d) For evaluation of requests under paragraph (c) of this clause based on unreasonable cost, the following information and any applicable supporting data based on the survey of suppliers shall be included in the request:

Foreign and Domestic Construction Materials Price Comparison

Unit of Price

Construction material description measure Quantity (dollars)\1\

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.

\1\ Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued).

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.

52.228-15 PERFORMANCE AND PAYMENT BONDS--CONSTRUCTION (SEP 1996)-

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

Contract price means the award price of the contract or, for requirements contracts, the price payable for the estimated quantity; or for indefinite-delivery type contracts, the price payable for the specified minimum quantity.

(b) Unless the resulting contract price is \$100,000 or less, the successful offeror shall be required to furnish performance and payment bonds to the Contracting Officer as follows:

(1) Performance Bonds (Standard Form 25): (i) The penal amount of performance bonds shall be 100 percent of the original contract price.

(ii) The Government may require additional performance bond protection when the contract price is increased. The increase in protection shall generally equal 100 percent of the increase in contract price.

(iii) The Government may secure additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

(2) Payment Bonds (Standard Form 25-A):

(i) The penal amount of payment bonds shall equal--

(A) 50 percent of the contract price if the contract price is not more than \$1 million;

(B) 40 percent of the contract price if the contract price is more than \$1 million but not more than \$5 million; or

(C) \$2.5 million if the contract price is more than \$5 million.

(ii) If the original contract price is \$5 million or less, the Government may require additional protection if the contract price is increased. The penal amount of the total protection shall meet the requirement of subparagraph (b)(2)(i) of this clause.

(iii) The Government may secure additional protection by directing the Contractor to increase the penal sum of the existing bond or to obtain an additional bond.

(c) 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) 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.

52.232-27 PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS (JUN 1997)

Notwithstanding any other payment terms in this contract, the Government will make invoice payments and contract financing payments under the terms and conditions specified in this clause. Payment shall be considered 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 section 32.902 of the Federal Acquisition Regulation. All days referred to in this clause are calendar days, unless otherwise specified. (However, see subparagraph (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 shall be 14 days after receipt of the payment request by the designated billing office. 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 shall be the 14th day after the date of the Contractor's payment request, provided a proper payment request is received 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, shall be as specified in the contract or, if not specified, 30 days after approval for release to the Contractor by the Contracting Officer.

(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 shall be either the 30th day after receipt by the designated billing office of a proper invoice from the Contractor, or the 30th day after Government acceptance of the work or services completed by the Contractor, whichever is later. 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 shall be the 30th day after the date of the Contractor's invoice, provided a proper invoice is received and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(B) On a final invoice where the payment amount is subject to contract settlement actions (e.g., release of claims), acceptance shall be deemed to have occurred on the effective date of the contract settlement.

(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)(ix) of this clause. If the invoice does not comply with these requirements, it shall be returned within 7 days after the date the designated billing office received the invoice, with a statement of the reasons why it is not a proper invoice. Untimely notification will be taken into account in computing any interest penalty owed the Contractor in the manner described in subparagraph (a)(4) of this clause.

(i) Name and address of the Contractor.

(ii) Invoice date. (The Contractor is encouraged to 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., prompt payment discount 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 be notified 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) Any other information or documentation required by the contract.

(x) While not required, the Contractor is strongly encouraged to assign an identification number to each invoice.

(3) Interest penalty. An interest penalty shall be paid automatically by the designated payment office, 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 when Federal Government offices are closed and Government business is not expected to be conducted, payment may be made on the following business day without incurring a late payment interest penalty.

(i) A proper invoice was received by the designated billing office.

(ii) A receiving report or other Government documentation authorizing payment was processed 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 interest penalty shall be at the rate established by the Secretary of the Treasury under section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) that is in effect on the day after the due date, except where the interest penalty is prescribed by other governmental authority (e.g., tariffs). This rate is referred to as the "Renegotiation Board Interest Rate," and it is published in the Federal Register semiannually on or about January 1 and July 1. The interest penalty shall accrue daily on the invoice principal payment amount approved by the Government until the payment date of such approved principal amount; and will be compounded in 30-day increments inclusive from the first day after the due date through the payment date. That is, interest accrued at the end of any 30-day period will be added to the approved invoice principal payment amount and will be subject to interest penalties if not paid in the succeeding 30-day period. If the designated billing office failed to notify the Contractor of a defective invoice within the periods prescribed in subparagraph (a)(2) of this clause, the due date on the corrected invoice will be adjusted by subtracting from such date the number of days taken beyond the prescribed notification of defects period. Any interest penalty owed the Contractor will be based on this adjusted due date. Adjustments will be made by the designated payment office for errors in calculating interest penalties.

(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 shall be deemed to have occurred constructively on the 7th day after the Contractor has completed the work or services in accordance with the terms and conditions of the contract. In the event that actual acceptance or approval occurs within the constructive acceptance or approval period, the determination of an interest penalty shall be based 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 following periods of time will not be included in the determination of an interest penalty:

(A) The period taken to notify the Contractor of defects in invoices submitted to the Government, but this may not exceed 7 days.

(B) The period between the defects notice and resubmission of the corrected invoice by the Contractor.

(C) For incorrect electronic funds transfer (EFT) information, in accordance with the EFT clause of this contract.

(iii) Interest penalties will not continue to accrue after the filing of a claim for such penalties under the clause at 52.233-1, Disputes, or for more than 1 year. Interest penalties of less than \$1 need not be paid.

(iv) Interest penalties are not required on payment delays 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. Claims involving disputes, and any interest that may be payable, will be resolved in accordance with the clause at 52.233-1, Disputes.

(5) Prompt payment discounts. An interest penalty also shall be paid automatically by the designated payment office, without request from the Contractor, if a discount for prompt payment is taken improperly. The interest penalty will be calculated on the amount of discount taken for the period beginning with the first day after the end of the discount period through the date when the Contractor is paid.

(6) Additional interest penalty.

(i) A penalty amount, calculated in accordance with subdivision (a)(6)(iii) of this clause, shall be paid in addition to the interest penalty amount if the Contractor--

(A) Is owed an interest penalty of \$1 or more;

(B) Is not paid the interest penalty within 10 days after the date the invoice amount is paid; and

(C) Makes a written demand to the designated payment office for additional penalty payment, in accordance with subdivision (a)(6)(ii) of this clause, postmarked not later than 40 days after the date the invoice amount is paid.

(ii)(A) Contractors shall support written demands for additional penalty payments with the following data. No additional data shall be required. Contractors 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) Demands must be postmarked on or before the 40th day after payment was made, except that--

(1) If the postmark is illegible or nonexistent, the demand must have been received and annotated with the date of receipt by the designated payment office on or before the 40th day after payment was made; or

(2) If the postmark is illegible or nonexistent and the designated payment office fails to make the required annotation, the demand's validity will be determined by the date the Contractor has placed on the demand; provided such date is no later than the 40th day after payment was made.

(iii)(A) The additional penalty shall be equal to 100 percent of any original late payment interest penalty, except--

(1) The additional penalty shall not exceed \$5,000;

(2) The additional penalty shall never be less than \$25; and

(3) No additional penalty is owed if the amount of the underlying interest penalty is less than \$1.

(B) If the interest penalty ceases to accrue in accordance with the limits stated in subdivision (a)(4)(iii) of this clause, the amount of the additional penalty shall be calculated on the amount of interest penalty that would have accrued in the absence of these limits, subject to the overall limits on the additional penalty specified in subdivision (a)(6)(iii)(A) of this clause.

(C) For determining the maximum and minimum additional penalties, the test shall be the interest penalty due on each separate payment made for each separate contract. The maximum and minimum additional penalty shall not be based upon individual invoices unless the invoices are paid separately. Where payments are consolidated for disbursing purposes, the maximum and minimum additional penalty determination shall be made separately for each contract therein.

(D) The additional penalty does not apply to payments regulated by other Government regulations (e.g., payments under utility contracts subject to tariffs and regulation).

(b) Contract financing payments--

(1) Due dates for recurring financing payments. If this contract provides for contract financing, requests for payment shall be submitted to the designated billing office as specified in this contract or as directed by the Contracting Officer. Contract financing payments shall be made on the 30th day after receipt of a proper contract financing request by the designated billing office. In the event that an audit or other review of a specific financing request is required to ensure compliance with the terms and conditions of the contract, the designated

payment office is not compelled to make payment by the due date specified.

(2) Due dates for other contract financing. For advance payments, loans, or other arrangements that do not involve recurring submissions of contract financing requests, payment shall be made in accordance with the corresponding contract terms or as directed by the Contracting Officer.

(3) Interest penalty not applicable. Contract financing payments shall not be assessed an interest penalty for payment delays.

(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 include a payment clause and an interest penalty clause conforming to the standards set forth in subparagraphs (c)(1) and (c)(2) of this clause in each of its subcontracts, and to 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) A copy of any notice issued by a Contractor pursuant to subdivision (d)(3)(i) of this clause has been furnished to the Contracting Officer.

(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 subparagraph (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 subparagraph (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 subparagraph (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 subdivision (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 subparagraph (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. A written notice of any withholding shall be issued to a subcontractor (with a copy to the

Contracting Officer of any such notice issued by the Contractor), 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 United States is a party. The United States 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 United States for such interest penalty. A cost-reimbursement claim may not include any amount for reimbursement of such interest penalty.

(End of clause)

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.

52.244-6 SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS (OCT 1998)

(a) Definitions.

"Commercial item", as used in this clause, has the meaning contained in the clause at 52.202-1, Definitions.

"Subcontract", as used in this clause, 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) Notwithstanding any other clause of this contract, the Contractor is not required to include any FAR provision or clause, other than those listed below to the extent they are applicable and as may be required to establish the reasonableness of prices under Part 15, in a subcontract at any tier for commercial items or commercial components:

(1) 52.222-26, Equal Opportunity (E.O. 11246);

(2) 52.222-35, Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era (38 U.S.C. 4212(a));

(3) 52.222-36, Affirmative Action for Workers with Disabilities (29 U.S.C. 793); and

(4) 52.247-64, Preference for Privately-Owned U.S.-Flagged Commercial Vessels (46 U.S.C. 1241)(flow down not required for subcontracts awarded beginning May 1, 1996).

(d) The Contractor shall include the terms of this clause, including this paragraph (d), in subcontracts awarded under this contract.

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>
<http://farsite.hill.af.mil>
<http://www.dtic.mil/dfars>

52.252-6 AUTHORIZED DEVIATIONS IN CLAUSES (APR 1984)

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

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

MAIN OUTLET DITCH, REACH 1A
 PHILLIPS COUNTY, ARKANSAS
 HELENA AND VICINITY PROJECT - CONSTRUCTION

SECTION 00800

SPECIAL CONTRACT REQUIREMENTS

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MAIN OUTLET DITCH, REACH 1A
PHILLIPS COUNTY, ARKANSAS
HELENA AND VICINITY PROJECT - CONSTRUCTION

SECTION 00800 - SPECIAL CONTRACT REQUIREMENTS

1.1. COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984). The Contractor shall be required to (a) commence work under this contract within 10 calendar days after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than 180 calendar days after the date of receipt by him of notice to proceed. The time stated for completion shall include final cleanup of the premises. (FAR 52.211-10)

1.2. NOT USED.

1.3. LIQUIDATED DAMAGES-CONSTRUCTION (APR 1984).

a. If the Contractor fails to complete the work within the time specified in the contract, or any extension, the Contractor shall pay to the Government as liquidated damages, the sum of \$520.00 for each day of delay.

b. If the Government terminates the Contractor's right to proceed, the resulting damage will consist of liquidated damages until such reasonable time as may be required for final completion of the work together with any increased costs occasioned the Government in completing the work.

c. If the Government does not terminate the Contractor's right to proceed, the resulting damage will consist of liquidated damages until the work is completed or accepted. (FAR 52.211-12)

1.4. NOT USED.

1.5. CONTRACT DRAWINGS, MAPS, AND SPECIFICATIONS (DEC 1991).

a. The Government will provide the Contractor, without charge, a compact disk (CD) containing contract drawings and specifications (except publications incorporated into the technical provisions by reference) and any amendments that were issued.

b. The Contractor shall--

(1) Check all drawings immediately;

(2) Compare all drawings and verify the figures before laying out the work;

(3) Promptly notify the Contracting Officer of any discrepancies; and

(4) Be responsible for any errors which might have been avoided by complying with this paragraph b.

c. Figures marked on drawings shall, in general, be followed in preference to scale measurements.

d. 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 shall be performed as if fully and correctly set forth and described in the drawings and specifications.

e. The work shall conform to the specifications and the contract drawings identified on the following index of drawings:

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GUARDRAIL DETAILS	7
EXCAVATED MATERIAL DISPOSAL AREA	8
BORING LOGS AND BORING LEGEND	9
TEMPORARY EROSION CONTROL DEVICES (DFARS 252.236-7001)	STD

1.6. PHYSICAL DATA (APR 1984). Data and information furnished or referred to below are for the Contractor's information. The Government shall not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

a. The indications of physical conditions on the drawings and in the specifications are the result of site investigations by aerial photographs and topographic surveys.

b. Weather Conditions. Information with respect to temperatures and precipitation may be obtained from the National Weather Service. Also see paragraph 1.28, "Time Extensions for Unusually Severe Weather".

c. Transportation Facilities.

(1) Roads. State Highways 49 and 61 serve the project site.

(2) Railroads. Union Pacific Railroad serves the project site.

d. Additional Data. Additional data consisting of cross sections river stage records, records of borings, and boring samples may be available for inspection at the U.S. Army Engineer District, Memphis, Tennessee. (FAR 52.236-4)

1.7 RIGHTS-OF-WAY.

a. The rights-of-way and easements for the work to be constructed under this contract within the limits indicated on the drawings will be provided by the Government without cost to the Contractor. However, the Contractor shall

make his own arrangements with the appropriate owners or organizations for transporting his equipment across, over or under railroad tracks, highways, bridges, private property, and utility lines and shall provide at his own expense any additional right-of-way or easements required to effect such crossings, including insurance requirements of owners. Limits of right-of-way which will be provided by the Government are as indicated on the drawings.

b. The Contractor shall, upon reasonable notice, without expense to the Government and at any time during the progress of the work when not being actively used for contract operations, promptly vacate and clean up any part of the Government grounds that have been allotted to or have been in use by him when directed to do so by the Contracting Officer.

c. The Contractor shall not obstruct any existing roads on the lands controlled by the United States except with the permission of the Contracting Officer, and shall maintain such roads in as good condition as exists at the time of commencement of the work.

d. Any additional right-of-way required for access or for the Contractor's method of operation must be obtained by and at the expense of the Contractor. The Contractor shall submit written evidence to the Contracting Officer that he has obtained the rights-of-way from the property owners. The written evidence shall consist of an authenticated copy of the conveyance under which the Contractor acquired the rights-of-way, prepared and executed in accordance with the laws of the State of Arkansas. If temporary rights are obtained by the Contractor, the period of time shall coincide with paragraph 1.1, "Commencement, Prosecution, and Completion of Work", of the SPECIAL CONTRACT REQUIREMENTS, plus a reasonable time for any extension granted for completion of the work. The Contractor shall be solely responsible for any and all damages, claims for damages, and liability of any nature whatsoever arising from or growing out of the use of rights-of-way other than those rights-of-way furnished by the Government.

e. The Contractor shall repair, at his own expense, any and all damage to the existing roads when such damage is a result of his operations on this contract. The Contractor shall also replace, at his own expense, any and all surfacing displaced or damaged by his operations on this contract. The repairs and/or replacement shall be done to the satisfaction of the Contracting Officer.

1.8. LAYOUT OF WORK.

a. The Contractor will re-establish the following baselines and bench marks at the site of the work:

- (1) Baselines as shown on the drawings.
- (2) Bench marks as shown on the drawings.

b. From the baselines and bench marks established by the Government, the Contractor shall complete the layout of the work and shall be responsible for all measurements that may be required for the execution of the work to the location and limit marks prescribed in the specifications or on the contract drawings, subject to such modifications as the Contracting Officer may require to meet changed conditions or as a result of necessary modifications to the contract work.

c. The Contractor shall furnish, at his own expense, such stakes, templates, platforms, equipment, tools and materials, and all labor as may be

required in laying out any part of the work from the baselines and bench marks established by the Government. It shall be the responsibility of the Contractor to maintain and preserve all stakes and marks established by the Contracting Officer until authorized to remove them, and if such marks are destroyed, by the Contractor or through his negligence, prior to their authorized removal, they may be replaced by the Contracting Officer, at his discretion, and the expense of replacement will be deducted from any amounts due or to become due the Contractor. The Contracting Officer may require that work be suspended at any time when location and limit marks established by the Contractor are not reasonably adequate to permit checking of the work.

1.9. NOT USED.

1.10. QUANTITY SURVEYS-ALTERNATE I (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 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)

d. Quantity surveys as used in this clause means a topographical survey accomplished by ground methods requiring the use of a total station instrument with the display output recorded and stored in an electronic field book for further calculations in a computer. The Contractor shall furnish the electronic data in an Intergraph or PacSoft format to the Contracting Officer.

e. Quantity Survey Method. The cross-section method shall be use to obtain topography. Cross-section spacing will depend upon the terrain but shall not exceed 100 feet. All breaks in slope shall be recorded along the cross-section with a maximum distance 25 feet between observations.

f. Quantity Survey Limits. After clearing of vegetation and trees, the topographic survey shall extend to 50 feet beyond the limits of work or to the Right-of-Way limits as shown on the drawings.

1.11. PROGRESS CHART. The schedule of work will be in accordance with the progress chart. The progress chart required by provisions of paragraph (a) of the CONTRACT CLAUSE entitled "Schedules for Construction Contracts" shall be prepared on ENG Form 2454, copies of which will be furnished to the Contractor by the Government. THREE COPIES OF THE SCHEDULE WILL BE REQUIRED.

1.12. SAFETY-RELATED SPECIAL REQUIREMENTS. ALL WORK UNDER THIS CONTRACT SHALL COMPLY WITH THE LATEST VERSION OF U.S. ARMY CORPS OF ENGINEERS SAFETY AND HEALTH REQUIREMENTS MANUAL, EM 385-1-1, AND OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) STANDARDS IN EFFECT ON THE DATE OF THE SOLICITATION. NO SEPARATE PAYMENT

WILL BE MADE FOR COMPLIANCE WITH EM 385-1-1, OR FOR COMPLIANCE WITH ANY OF THE OTHER SAFETY-RELATED SPECIAL REQUIREMENTS.

a. Accident Investigations and Reporting. Refer to EM 385-1-1, Section 1. Accidents shall be investigated and reports completed by the immediate supervisor of the employee(s) involved and reported to the Contracting Officer or his representative within one working day after the accident occurs.

b. Accident Prevention Program. Refer to the CONTRACT CLAUSE entitled, "Accident Prevention (Alternate I)". Within 21 calendar days after receipt of Notice of Award of the contract, four copies of the Accident Prevention Program shall be submitted to the Contracting Officer for review and approval. The program shall be prepared in the following format:

(1) An executed LMV Form 358R, Administrative Plan (available upon request).

(2) An executed LMV Form 359R, Activity Hazard Analysis (available upon request).

(3) A copy of company policy statement regarding accident prevention.

(4) When marine plant and equipment are in use under a contract, the method of fuel oil transfer shall be submitted on LMV Form 414R,

Fuel Oil Transfer, (available upon request). (Refer to 33 CFR 156.)

The Contractor shall not commence physical work at the site until the program has been approved by the Contracting Officer, or his authorized representative. At the Contracting Officer's discretion, the Contractor may submit his Activity Hazard Analysis for only the first phase of construction provided that it is accompanied by an outline of the remaining phases of construction. All remaining phases shall be submitted and accepted prior to the beginning of work in each phase. Also refer to Section 1 of EM 385-1-1.

c. Daily Inspections. The Contractor shall perform daily safety inspections and record them on the forms approved by the Contracting Officer. Reports of daily inspections shall be maintained at the jobsite. The reports shall be records of the daily inspections and resulting actions. Each report will include, as a minimum, the following:

(1) Phase(s) of construction underway during the inspection.

(2) Locations or areas inspections were made.

(3) Results of inspection, including nature of deficiencies observed and corrective actions taken, or to be taken, date, and signature of the person responsible for its contents.

d. Machinery and Mechanized Equipment. Machinery and mechanized equipment used under this contract shall comply with the following:

(1) When mechanized equipment is operated on floating plant, the Contractor shall provide positive and acceptable means of preventing this equipment from moving or falling into the water. The type of equipment addressed by this clause includes front-end loaders, bulldozers, trucks (both on- and off-road), backhoes, track hoes, and similar equipment. If the Contractor plans to use such equipment on floating plant, an activity hazard analysis must be

developed for this feature of work. The plan must include a detailed explanation of the type or types of physical barriers, curbs, structures, etc., which will be incorporated to protect the operator and prevent the equipment from entering the water. Nonstructural warning devices may be considered for situations where the use of structural barriers is determined to be impracticable. The activity hazard analysis must thoroughly address the procedure and be submitted to the Corps for review and acceptance prior to start of this feature of work.

(2) The stability of crawler, truck, and wheel-mounted cranes shall be assured.

(a) The manufacturer's load-rating chart may be used to determine the maximum allowable working load for each particular crane's boom angle provided a test load, with a boom angle of 20 degrees, confirms the manufacturer's load-rating table.

(b) Stability tests are required if:

(i) There is no manufacturer's load-rating chart securely fixed to the operator's cab;

(ii) There has been a change in the boom or other structural members; or

(iii) There has been a change in the counter-weight.

The test shall consist of lifting a load with the boom in the least stable undercarriage position and at an angle of 20 degrees above the horizontal. The test shall be conducted under close supervision on a firm, level surface. The load that tilts the machine shall be identified as the test load. The test load moment (in ft-lbs) shall then be calculated by multiplying the horizontal distance (in ft) from the center of rotation of the machine to the test load, times the test load (in lbs). Three-fourths of this test-load moment shall then be used to compute the maximum allowable operating loads for the boom at 20, 40, 60, and 80 degrees above horizontal. From these maximum allowable operating loads, a curve shall be plotted and posted in the cab of the machine in sight of the operator. These values shall not be exceeded except in the performance test described below. The test load shall never exceed 110 percent of the manufacturer's maximum rated capacity.

(c) In lieu of the test and computations above, the crane may be load tested for stability at each of the four boom positions listed above.

(3) Performance tests shall be performed in accordance with Section 16 of EM 385-1-1. Performance tests shall be conducted after each stability test, when the crane is placed in service on a project, and at least every 12 months.

(4) Inspections shall be made which will ensure a safe and economical operation of both cranes and draglines. Specific inspections and their frequencies are listed on the appropriate checklists noted below. Results of inspections and tests for cranes shall be recorded on the Safety Inspection Check List, LMV Form 326R (available upon request), and inspection results for draglines shall be recorded on LMV Form 373R (available upon request). Copies of the inspections and tests shall be available at the jobsite for review. All stability and performance tests on cranes and all complete dragline inspections shall be witnessed by the Contracting Officer or his authorized representative.

(5) A complete dragline inspection shall be made:

(a) At least annually;

(b) Prior to the dragline being placed in operation;
and

(c) After the dragline has been out of service for more than six months.

e. Safety Sign. The Contractor shall furnish, erect, and maintain a safety sign at the site, as located by the Contracting Officer. The sign shall conform to the requirements of this paragraph and the drawing entitled "Safety Sign", included at the end of these Special Contract Requirements. The lettering shall be black and the background white. When placed on a floating plant, the sign may be half size. Upon request, the Government will furnish a decal of the Engineer Castle. The sign shall be erected as soon as practicable, but not later than 15 calendar days after the date established for commencement of work. The data required shall be current.

1.13. BASIS FOR SETTLEMENT OF PROPOSALS (JAN 1997). Actual costs will be used to determine equipment costs for a settlement proposal submitted on the total cost basis under FAR 49.206-2(b). In evaluating a terminations settlement proposal using the total cost basis, the following principles will be applied to determine allowable equipment costs:

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

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

(3) Recorded job costs adjusted for unallowable expenses will be used to determine equipment operating expenses.

(4) Ownership costs (depreciation) will be determined using the Contractor's depreciation schedule (subject to the provisions of 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. (EFARS 52.249-5000)

1.14. CERTIFICATES OF COMPLIANCE. Any certificates required for demonstrating proof of compliance of material with specification requirements shall be executed in four (4) copies. Each certificate shall be signed by an official authorized to certify on 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 test to which the report applies. Certification shall not be construed as relieving the Contractor from furnishing satisfactory material, if, after tests are performed on selected samples, the material is found not to meet the specific requirements.

1.15. CONTRACTOR'S CERTIFICATE. Each submittal of shop drawings and materials data shall be accompanied by a certificate, signed by the head of the

Quality Control Organization of the prime Contractor, that the prime Contractor has reviewed in detail all shop drawings and materials contained in the submittal and that they are correct and in strict conformance with the contract drawings and specifications except as may be otherwise explicitly stated. The Government will first check for the Contractor's certificate and then review and render approval action or indicate disapproval in those cases where contract requirements are not fulfilled.

1.16. NOT USED.

1.17. AS-BUILT DRAWINGS. The Contractor shall maintain two (2) full-size sets of the Contract drawings depicting a current record of the work as actually constructed. One set is for the Contractor's use and one for the Government's use. These working as-built drawing red-line mark-ups may be manually or electronically generated using the construction plans. These working as-built drawings shall be reviewed at least monthly with the Contracting Officer, prior to the Contractor submitting a request for progress payment. Both shall certify that the as-built drawings are accurate and up-to-date before progress payment is made. Upon completion of the work and not later than 60 days from acceptance, the Contractor shall deliver a complete final set of the as-built red-line marked-up plans depicting the construction as actually accomplished. The final as-built drawings shall be identified as such by marking or stamping them with the words "AS-BUILT DRAWINGS" in letters at least 3/16" high. Those drawings where no change is involved shall be marked or stamped "AS-BUILT, NO CHANGE". Compliance and delivery of the final as-built drawings will be enforced through the approval of final payment. Also, the quality of the final as-built drawings will be reflected in the Contractor's performance evaluation.

1.18. DAMAGE TO WORK. The responsibility for damage to any part of the permanent work shall be as set forth in the CONTRACT CLAUSE entitled "Permits and Responsibilities". However, if, in the judgement of the Contracting Officer, any part of the permanent work performed by the Contractor is damaged by flood, tornado, 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 the CONTRACT CLAUSE entitled "Changes" will be made as full compensation for the repairs of that part of the permanent work for which there are no applicable contract unit or lump sum prices. Except as herein provided, damage to all work (including temporary construction), utilities, materials, equipment and plant shall be repaired to the satisfaction of the Contracting Officer at the Contractor's expense regardless of the cause of such damage.

1.19. NOTIFICATION OF AREA ENGINEER BEFORE BEGINNING WORK. At least 7 days before beginning work, the Contractor shall notify Mr. Donald R. Tutor, Area Engineer, Wynne Area Office, Bennie House Center, Highway 1 North, P.O. Box 729, Wynne, Arkansas 72396-0729, Telephone No. 901-544-3851 or 870-238-7983. COLLECT CALLS WILL NOT BE ACCEPTED.

1.20. EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE (MAR 1995).

a. This clause does not apply to terminations. See SPECIAL CONTRACT REQUIREMENT entitled, "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 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 III. 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 used or a rate may be developed using the formula provided in the schedule. For forward pricing, the schedule in effect at the time of negotiations shall apply. For retroactive 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)(2)(ii) and FAR 31.205-36. Rates for equipment rented from an organization under common control, lease-purchase arrangements, and sale-lease-back 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. (EFARS 52.231-5000)

NOTE: THE CONTRACTOR MAY PURCHASE THE EQUIPMENT MANUAL FROM THE GOVERNMENT PRINTING OFFICE. THE GOVERNMENT PRINTING OFFICE TELEPHONE NO. IS 202-512-1800.

1.21. RETESTING OF CONSTRUCTION MATERIALS. Unless otherwise specified, where the Technical Specifications state that tests will be performed at the expense of the Government, the cost of only the initial test will be borne by the Government. Any retesting due to failure of the materials to meet the requirements in the initial test or any retesting requested by the Contractor shall be performed at the Contractor's expense. The retests shall be at laboratories approved by the Contracting Officer. The costs of retests made at Government laboratories will be deducted from the total amount due the Contractor.

1.22. VEHICLE WEIGHT LIMITATIONS. Vehicle weight limitations for operation on roads, streets, and bridges may affect the prosecution of work under this contract. The Contractor will be responsible for obtaining all necessary licenses and permits in accordance with the CONTRACT CLAUSE entitled "Permits and Responsibilities". The Contractor shall use the following as a designated route for hauling only excavated materials through the City of Helena, Arkansas, turn north on Pecan Street, turn east on Perry Street, go to the city Park disposal site.

1.23. OBSTRUCTIONS.

a. All utilities within the right-of-way limits will have been altered and placed in permanent alignment prior to channel contract. They will not be altered again for the channel Contractor at the Government's expense. The Contractor shall contact the Wynne Area Office phone (901) 544-3851 or (870) 238-7983 to determine if the utility lines are in their permanent alignment. In case the Contractor desires rerouting, raising, or other alterations he shall make his own arrangements with owners of utility lines located within the right-of-way for the rerouting or altering of utility lines as may be necessary to provide clearance for the construction of the work under this contract, and for the

replacement of the lines in their permanent location after the completion of the work adjacent thereto. No separate payment will be made for the alteration of these utility lines and the costs in connection therewith shall be considered as an incidental expense to the Contractor. The Contractor shall exercise special care when working in the vicinity of utility lines to prevent damage thereto or injury to the Contractor's employees or others.

b. Existing Fences. Existing fences within the work limits will be removed, if necessary, by others as the construction progresses. The Contractor shall notify Mr. Charles B. Roscof, Attorney, Helena Improvement District, C/O Charles B. Roscof, Attorney, P.O. Box 610, Helena, Arkansas 72342 (501) 338-3438, at least 10 days prior to the date the removal of fences at each separate location will be required. The Contractor shall cooperate fully with the local officials with respect to the removal of fences. Any unwarrantable damage to the fences occasioned by the Contractor's operations shall be repaired at his expense.

1.24. NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES). In compliance with the General Permit of the NPDES, the Contracting Officer will file a Notice of Intent (NOI) with the State of Arkansas. In addition, the Stormwater Pollution Prevention Plan (SWPPP) required by the General Permit has been prepared and is included at the end of these Special Contract Requirements. The Contractor shall adhere strictly to the erosion control provisions of SWPPP and SECTION 01130 - ENVIRONMENTAL PROTECTION to minimize sediment discharge into nearby water courses to the maximum extent practicable. Furthermore, the Contractor and all subcontractors shall sign the certification contained in the SWPPP. The Contractor shall maintain the SWPPP on the construction site at all times. The SWPPP shall take precedence over the technical specifications.

1.25. PERFORMANCE OF WORK BY THE CONTRACTOR (APR 1984). The Contractor shall perform on the site, and with its own organization, work equivalent to at least fifteen (15) 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)

1.26. CONTINUING CONTRACTS (MAR 1995).

a. This is a continuing contract, as authorized by Section 10 of the River and Harbor Act of September 22, 1922 (33 U.S. Code 621). The payment of some portion of the contract price is dependent upon reservations of funds from future appropriations, and from future contribution to the project having one or more non-federal project sponsors. The responsibilities of the Government are limited by this clause notwithstanding any contrary provision of the "Payments Under Fixed-Price Construction Contracts" clause or any other clause of this contract.

b. The sum of \$100,000.00 has been reserved for this contract and is available for payments to the Contractor during the current fiscal year. It is expected that Congress will make appropriations for future fiscal years from which additional funds together with funds provided by one or more non-federal project sponsors will be reserved for this contract.

c. Failure to make payments in excess of the amount currently reserved, or that may be reserved from time to time, shall not entitle the Contractor to a price adjustment under the terms of this contract except as specifically provided in paragraphs "f" and "i" below. No such failure shall constitute a breach of this contract, except that this provision shall not bar

a breach-of-contract action if an amount finally determined to be due as a termination allowance remains unpaid for one year due solely to a failure to reserve sufficient additional funds therefor.

d. The Government may at any time reserve additional funds for payments under the contract if there are funds available for such purpose. The Contracting Officer will promptly notify the Contractor of any additional funds reserved for the contract by issuing an administrative modification to the contract.

e. If earnings will be such that funds reserved for the contract will be exhausted before the end of any fiscal year, the Contractor shall give written notice to the Contracting Officer of the estimated date of exhaustion and the amount of additional funds which will be needed to meet payments due or to become due under the contract during that fiscal year. This notice shall be given not less than 45 nor more than 60 days prior to the estimated date of exhaustion.

f. No payments will be made after exhaustion of funds except to the extent that additional funds are reserved for the contract. The Contractor shall be entitled to simple interest on any payment that the Contracting Officer determines was actually earned under the terms of the contract and would have been made except for exhaustion of funds. Interest shall be computed from the time such payment would otherwise have been made until actually or constructively made, and shall be at the rate established by the Secretary of the Treasury pursuant to Public Law 92-41, 85 STAT 97, as in effect on the first day of the delay in such payment.

g. Any suspension, delay, or interruption of work arising from exhaustion or anticipated exhaustion of funds shall not constitute a breach of this contract and shall not entitle the Contractor to any price adjustment under the "Suspension of Work" clause or in any other manner under this contract.

h. An equitable adjustment in performance time shall be made for any increase in the time required for performance of any part of the work arising from exhaustion of funds or the reasonable anticipation of exhaustion of funds.

i. If, upon the expiration of sixty (60) days after the beginning of the fiscal year following an exhaustion of funds, the Government has failed to reserve sufficient additional funds to cover payments otherwise due, the Contractor, by written notice delivered to the Contracting Officer at any time before such additional funds are reserved, may elect to treat his right to proceed with the work as having been terminated. Such a termination shall be considered a termination for the convenience of the Government.

j. If at any time it becomes apparent that the funds reserved for any fiscal year are in excess of the funds required to meet all payments due or to become due the Contractor because of work performed and to be performed under the contract during the fiscal year, the Government reserves the right, after notice to the Contractor, to reduce said reservation by the amount of such excess. (EFARS 52.232-5001)

1.27. ACCEPTANCE SECTIONS. Items of work under this contract shall be accepted as follows:

a. Sections of channel excavation 1,000 feet long;

b. Acceptance of channel excavation for each 1,000 foot section shall also include acceptance of all clearing within that section;

c. Acceptance of channel excavation for each 1,000 foot section will not include acceptance of turfing or other related work.

1.28. TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER (31 OCT 1989).

a. This provision specifies the procedure for 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 (6) DAY WORK WEEK

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
(10)	(8)	(5)	(4)	(4)	(3)	(3)	(2)	(2)	(3)	(5)	(9)

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, Appendix A)

1.29. PAYMENT FOR MOBILIZATION AND DEMOBILIZATION (DEC 1991).

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

(1) Sixty (60) percent of the lump sum price upon completion of the Contractor's mobilization at the work site.

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

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

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

(i) Actual mobilization costs at completion of mobilization;

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

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

(2) The Contracting Officer's determination of the actual costs in paragraph b(1) of this clause is not subject to appeal. (DFARS 252.236-7004)

1.30. STONE SOURCES.

a. Stone meeting the requirements of these specifications has been produced from the sources listed below:

<u>Name of Firm</u>	<u>Name of Quarry</u>	<u>Location</u>	<u>Certification Date</u>
Brickeys Stone, LLC	Old Menefee	Bloomsdale, MO	1997
Martin Marietta Aggregates	Three Rivers	Smithland, KY	1996
Meridian Aggregate Co.	Valley Stone	Black Rock, AR	1995
Pine Bluff Sand and Gravel Co.	River Mountain	Delaware, AR	1996
Seminole Ag-Lime Co.	Seminole	Dexter, MO	1996
Tower Rock Stone Co.	Bussen	Ste. Genevieve, MO	1995
Tower Rock Stone Co.	Gray's Point	Scott City, MO	1995
Vulcan Materials Co.	Gilbertsville	Lake City, KY	1996
Vulcan Materials Co.	Parsons	Parsons, TN	1996
Vulcan Materials Co.	Verkler	Black Rock, AR	1996

b. Stone may be furnished either from any of the listed sources or from any other sources designated by the Contractor and accepted by the Contracting Officer, subject to the conditions hereinafter stated.

c. After the award of the contract, the Contractor shall designate in writing only one source or one combination of sources from which he proposes to furnish stone. If the Contractor proposes to furnish stone from a source or sources not listed above, he may designate only a single source for stone. Samples for acceptance testing shall be provided as required in the Technical Specifications. If a source for stone so designated by the Contractor is not accepted by the Contracting Officer for use, the Contractor may not propose other sources but shall furnish the stone from a listed source at no additional cost to the Government.

d. Acceptance of a source of stone shall not be construed as acceptance of all material from that source. The right is reserved to reject materials from certain localized areas, zones, strata, or channels, when such materials are unsuitable for stone as determined by the Contracting Officer. Materials produced from a listed source shall meet all the requirements of the Technical Specifications.

1.31. FIELD OFFICE BUILDING.

a. The Contractor shall furnish and maintain a temporary building for the exclusive use of the Government inspectors during the life of the contract. The building shall conform to the following requirements:

Floor Space	Not less than 150 sq. ft.
Height of Ceiling	Not less than 7 feet
Windows	Not less than 4
Doors	At least 1
Type of Floor	Wood or Concrete

The building shall be of light but weatherproof construction. Windows shall be arranged to open and to be fastened from the inside. All door and window openings shall be provided with suitable screens. The door shall be equipped with a durable hasp and padlock. Interior surfaces of exterior walls and ceilings shall be covered with insulating board and an inside storage room of adequate size shall be provided. The Contractor shall furnish an adequate supply of approved drinking water, sufficient electrical outlets for office calculators and equipment, adequate toilet facilities, all electricity required and sufficient fixtures for adequate lighting, and during cold weather shall furnish adequate heat. The field office, its location and all facilities shall be subject to the approval of the Contracting Officer. The building shall also be equipped with air conditioning during hot weather. The office shall be equipped with at least 2 chairs and one desk.

b. No separate payment will be made for furnishing and maintaining the field office. Such building will remain the property of the Contractor and shall be removed upon completion of the work as provided in the CONTRACT CLAUSE entitled "Operations and Storage Areas".

1.32. SUBMITTALS. Within 15 calendar days after receipt of notice to proceed, the Contractor shall complete and submit to the Contracting Officer, in duplicate, submittal register ENG Form 4288-R listing all submittals and dates. In addition to those items listed on ENG Form 4288-R, the Contractor shall furnish submittals for any deviation from the plans or specifications. The scheduled need dates must be recorded on the document for each item for control purposes. In preparing the document, adequate time (minimum of 30 days) will be allowed for review and approval and possible resubmittal. Scheduling shall be coordinated with the approved progress schedule. The Contractor's Quality Control representative shall review the listing at least every 30 days and take appropriate action to maintain an effective system. Two (2) copies of updated or corrected listing shall be submitted to the Contracting Officer at least every 60 days. Payment will not be made for any material or equipment which does not comply with contract requirements. An original and four (4) copies of all submittals shall be furnished the Contracting Officer. A completed submittal form, ENG Form 4025-R, shall accompany all submittals. Copies of ENG Form 4025-R and ENG Form 4288-R will be furnished the Contractor upon request. (ER 415-1-10, Appendices A and B)

1.33. THRU 1.34. NOT USED.

1.35. TEMPORARY PROJECT FENCING. Temporary project fencing as required by Paragraph 04.A.04 of EM 385-1-1 is not required on this project. A safety fence shall be installed between Station 123+00 to Station 140+67 due to local housing. The Contractor shall submit his safety fence plan to the Contracting Officer for approval.

1.36. THRU 1.38. NOT USED.

1.39. SUNDAY, HOLIDAY AND NIGHT WORK. Sunday and Holiday work will be at the option of the Contractor, but night work will not be permitted unless otherwise authorized by the Contracting Officer.

1.40. THRU 1.42. NOT USED.

1.43. 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 other-wise 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)

1.44. UTILITIES. All utilities located at the site are to remain in place and operative during the construction. The Contractor shall exercise special care when working in the vicinity of the utilities to prevent damage thereto or injury to the Contractor's employees or others. Any damage to the utilities or interruptions of service occasioned by the Contractor's operations shall be repaired and the service restored promptly at his expense.

1.45. THRU 1.46. NOT USED.

1.47. ELECTRICITY. All electric current required by the Contractor shall be furnished at his own expense. All temporary connections for electricity shall be subject to the approval of the Contracting Officer. All temporary lines shall be furnished, installed, connected and maintained by the Contractor in a workman-like manner satisfactory to the Contracting Officer, and shall be removed by the Contractor in like manner at his expense prior to completion of the construction.

1.48 THRU 1.50. NOT USED.

1.51. WORK ON OR ADJACENT TO RAILROAD PROPERTY. Inasmuch as this contract involves work on or about the premises of railroad track based by the Union Pacific Railroad Company, hereinafter referred to as "the Railroad", the Contractor shall coordinate and cooperate with the Railroad as follows:

a. Notify the Contracting Officer, in writing, at least 10 days in advance of commencing work adjacent to or on or under the Railroad property and obtain approval from the Contracting Officer as to the Contractor's methods of construction and operation.

b. Prior to any work being performed on the railroad or railroad property, the Contractor shall give notice, written and/or oral to the City Engineer, Mr. Jim Frazier or phone 870-338-3776, at least twenty-four (24) hours in advance of the time the work is to be performed.

c. The Contractor shall so arrange and conduct his work so that there will be no interference with railroad operations, including train, signal, telephone, and telegraphic services, or damage to the property of the Railroad, or to poles, wires, and other facilities of tenants on the right of way of the Railroad. The Contractor shall store materials so as to prevent trespassers from causing damage to trains, or railroad property.

d. Should conditions arising from or in connection with the work require that immediate and unusual provision be made to protect train operation and property of the Railroad, it shall be a part of the required service by the Contractor to make such provision and if, in the judgement of the Contracting Officer such provision is insufficient, the Contracting Officer may at the expense of the Contractor require or provide such provision as may be deemed necessary. The Contractor will be required to take special precaution and care in connection with excavating, shoring, and pile driving adjacent to track to

provide adequate lateral support for the tracks and the loads which they carry, without disturbance of track alignment and surface, and avoid obstructing track clearances with working equipment, tools or other material.

e. If the Contractor desires access across the Railroad right of way and tracks at other than an existing and open public road crossing in or incident to construction of the project, the Railroad will permit such Contractor access across said right of way and track provided the Contractor first executes a license agreement satisfactory to the Railroad, and agrees to install, maintain, provide insurance, and remove at his expense any temporary grade crossing, and bear flagging expense, or other costs which the Railroad deems necessary for protection of its property and operations. The Contractor shall at no time cross the Railroad's right of way and tracks with vehicles or equipment of any kind or character, except at such crossing or crossings as may be established.

f. Worktrain service may be available from the railroad upon request from the Contractor. Rates may be obtained from the General Manager specified in paragraph (b) above.

g. The Contractor shall obtain the anticipated train schedule from the proper railroad authorities and shall coordinate his work in accordance therewith. The Contractor shall be allowed free use of the track area during the periods when trains are not otherwise scheduled to run. Penalties caused by delays, obstruction, etc., shall be borne by the Contractor.

h. No charge or claims of the Contractor against the Railroad will be allowed for hindrance or delay on account of railroad traffic, any work done by the Railroad or other delay incident to or necessary for safe maintenance of railroad traffic or for any delays due to compliance with these special clauses.

i. The Contractor shall assume all liability for any and all damages to his work, employees, servants, equipment and materials caused by Railroad traffic.

j. The Contractor shall, at all times during the period of construction, keep the Railroad's track and roadbed free of earth, mud, rocks, materials, or debris that might be caused to accumulate thereon during progress of the work. Material and equipment shall not be stored where they will interfere with railroad operations, nor on the right of way of the Railroad without first having obtained permission from the Railroad and such permission will be with the understanding that the Railroad will not be liable for damage to such materials and equipment from any cause and that the Railroad may move, or require the Contractor to move, at the Contractor's expense, such material and equipment. In order to minimize the possibility of damage to the railroad tracks resulting from the unauthorized use of equipment, all grading or other construction equipment that is left parked near the tracks unattended by watchmen shall be immobilized to the extent feasible so that it cannot be moved by unauthorized persons.

k. The Contractor shall provide railroad certified flagmen and other protective services as necessary for the protection of railway traffic and property and for those engaged on the work. In general, the requirement of such services will be whenever the Contractor's men or equipment are, or are liable to be, working within specified track clearances.

l. The Contractor will reimburse the Railroad directly for all cost of flagging which is required for this work.

m. The Contractor shall give a minimum of 72 hours advance notice to the Railroad's Engineer for flagging service. No work shall be undertaken until the flagman, or flagmen, are at the job site.

n. The Contractor will be required upon completion of the work to remove from within the limits of the Railroad's right of way, any temporary grade crossings, any temporary erosion control measures used to control drainage, all machinery, equipment, surplus materials, false work, rubbish or temporary buildings of the Contractor, and to leave the right of way in a neat condition.

o. The Contractor shall take care not to foul the tracks thereby causing a hazard during the approach or passing of a train.

(1) An operating track shall be considered fouled and subject to hazard when any object is brought closer than eight (8) feet to the center line of the track.

(2) A signal line or communication line shall be considered fouled and subject to hazard when any object is brought closer than four (4) feet to any wire or cable.

(3) An electrical supply line shall be considered fouled and subject to hazard when any object is brought closer than ten (10) feet to any wire of the line.

(4) Cranes, trucks, power shovels or any other equipment shall be considered as fouling a track, signal line communication or electric supply line when working in such position that failure of equipment with or without lead could foul the track, signal line, communication or electric supply line.

(5) Railroad operations will be considered subject to hazard when explosives are used in the vicinity of Railroad premises, or during the driving or pulling of sheeting adjacent to a track, or when erecting structural steel across or adjacent to a track, or when operations involve swinging booms or chutes that could in any way come nearer than fifteen (15) feet to the center line of a track or when erection or removal of staging, false work, or forms fouls a track or wire line.

p. In the construction of staging, false work or forms, the Contractor shall at all times maintain a minimum side clearance of twelve (12) feet from the center line of the track. This clearance shall be maintained during the passage of trains.

q. The Contractor shall comply with all applicable Federal, State, and local safety and health laws regarding work performed on railroads and railroad property.

1.52. INSURANCE REQUIREMENTS FOR WORK ON OR ADJACENT TO RAILROAD PROPERTY. The Contractor shall furnish evidence of Workmen's Compensation coverage and maintain at all times during work on any Railroad property: (A) Contractor's Public Liability and Property Damage Liability Insurance, including automobile coverage, with limits of \$2,000,000/\$6,000,000 as to public liability and \$2,000,000/\$6,000,000 as to property damage liability; (B) If subcontractors are involved, Contractor's Protective Public Liability and Property Damage Liability Insurance, including automobile coverage, with the same limits prescribed in (A) above; and (C) Railroad Protective Public Liability and Property Damage Liability Insurance with the limits of \$2,000,000/\$6,000,000 as to public liability and \$2,000,000/\$6,000,000 as to property damage liability.

The Railroad Protective policy shall name the applicable Railroad as the insured and contain an endorsement in the form prescribed for State or Federal highway projects for railroad protective liability. The Contractor shall furnish to the applicable railroad, and to the Contracting Officer, the Railroad Protective policy and certificates evidencing the other insurance coverage required above. The Railroad Protective Policies and all insurance certificates shall be subject to the applicable railroad's approval before any work may be started on the railroad's property by the Contractor or his subcontractors. In addition, the Contractor shall furnish evidence of his commitment by the insurance company to notify the railway and the Contracting Officer in writing of any material change, expiration, or cancellation of the policy not less than 30 days before such change, expiration, or cancellation is effective.

1.53. THRU 1.62. NOT USED.

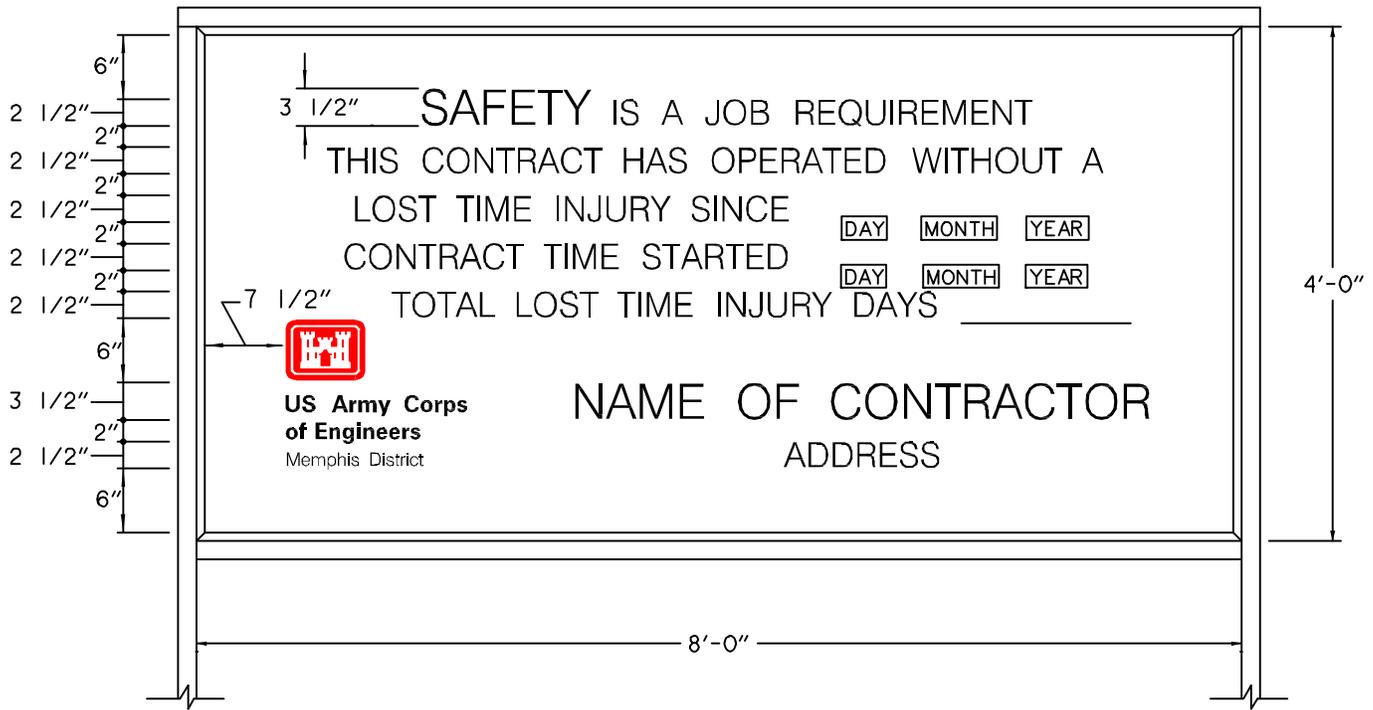
1.63. DESIGNATED BILLING OFFICE. The designated billing office for this contract shall be Wynne Area Office, Bennie House Center, Highway 1 North, P.O. Box 729, Wynne, Arkansas 72396-0729.

1.64 YEAR 2000 COMPLIANCE. In accordance with FAR 39.106, the Contractor shall ensure that with respect to any design, construction, goods, or services under this contract as well as any subsequent task/delivery orders issued under this contract (if applicable), all information technology contained therein shall be year 2000 compliant. Specifically the Contractor shall:

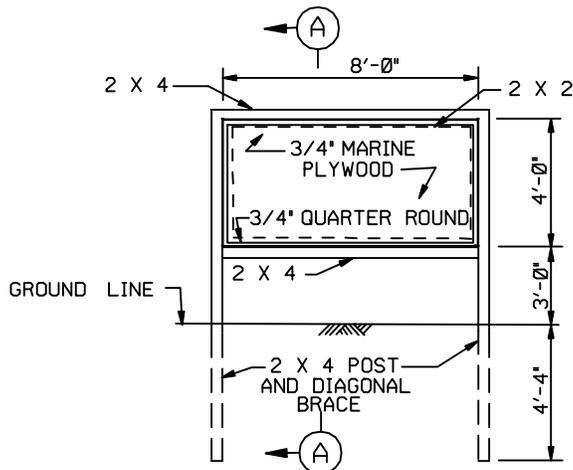
a. Perform, maintain, and provide an inventory of all major components to include structures, equipment, items, parts, and furnishings under this contract and each task/delivery order which may be affected by the Y2K compliance requirement.

b. Indicate whether each component is currently Year 2000 compliant or requires an upgrade for compliance prior to Government acceptance.

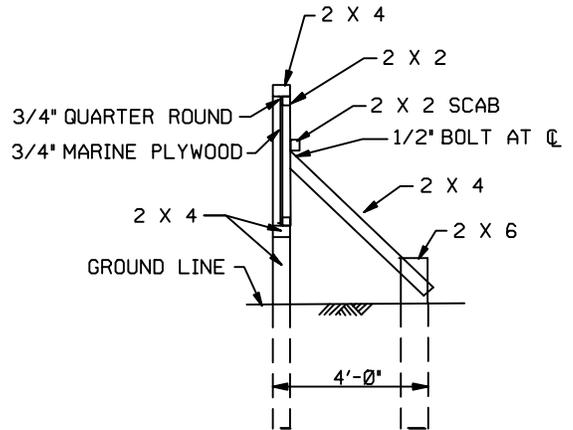
-- End of Section --



ELEVATION



ELEVATION



SECTION A-A

NOTES:

1. CONTRACTOR SHALL CONSTRUCT AND MAINTAIN A DURABLE SIGN AS SHOWN.
2. WOOD IN CONTACT WITH GROUND SHALL BE TREATED LUMBER.
3. ALL EXPOSED SURFACES SHALL BE WHITE HOUSE PAINT.
4. LETTERING SHALL BE BLACK.
5. ENGINEER CASTLE DECAL FURNISHED BY GOVERNMENT.
6. 22 GA. SHEET METAL MAY BE USED IN LIEU OF PLYWOOD.



**US Army Corps
of Engineers**

Memphis District

ENGINEER CASTLE DETAIL

SCALE: NONE

MARCH 1995

U.S. ARMY ENGINEER DISTRICT, MEMPHIS
CORPS OF ENGINEERS
MEMPHIS, TENNESSEE

SAFETY SIGN

**MAIN OUTLET DITCH, REACH 1A
PHILLIPS COUNTY, ARKANSAS
STORMWATER POLLUTION PREVENTION PLAN
FOR STORMWATER GENERAL PERMIT
U. S. ARMY CORPS OF ENGINEERS, MEMPHIS DISTRICT**

1. LOCATION AND NATURE OF ACTIVITY

Main Outlet Ditch is located in Phillips County, Arkansas, in the City Of Helena.

Work on this project shall consist of excavating the existing ditch to a bottom width of 50 feet with 1V on 3H side slopes from Station 140+67.20 (Hanks Lane) to Station 107+55.18, Approximately 3,762 feet. Riprap will be placed at the Hanks Lane bridge and the Railroad bridge and Power Line Anchor. Excavated material will be hauled from site and placed Riverside of the levee. Excavated material will be spread evenly over the entire disposal area.

2. AREA AFFECTED

The total area of the site, within the right of way limits, which will be impacted by construction, is approximately 32 acres, which may be disturbed during construction.

3. CONTROL OF POLLUTANTS DURING CONSTRUCTION

3.1 NON-STRUCTURAL MEASURES

3.1.1 General

Prior to the beginning of any construction, The Contracting Officer will identify all land resources to be preserved within the Contractor's work area. The Contractor shall not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, top soil, and land forms outside the construction limits without special permission. The Contractor shall provide effective protection for land, water, and vegetation resources at all times. The contractor shall construct or install temporary and/or permanent erosion and sedimentation control features as indicated herein to minimize pollutants entering the Mississippi River, and other water bodies or wetlands.

3.1.2 Protection of Landscape

Trees, shrubs, vines, grasses, land forms and other landscape features indicated and defined on the contract drawings or as directed by the Contracting Officer to be preserved shall be clearly identified by marking, fencing, wrapping with boards, or other approved techniques.

3.1.3 Reduction of Exposure to Unprotected Erodible Soils

All earthwork shall be planned and conducted to minimize duration of exposure of unprotected soils. Vegetative ground cover shall not be destroyed, removed or disturbed more than 20 calendar days prior to grading or earth moving. Clearing shall progress in reasonable sized increments as needed to use the areas developed. To the extent feasible, material embankments, side slopes, back slopes, berms and any other exposed surfaces shall be stabilized by temporary seeding, mulching, fabric mats or other approved stabilization methods, as soon as possible after material placement, or within 14 days on areas that will remain unfinished more than 21 calendar days. Should construction be halted, for any reason, temporary or permanently, for more than 21 days, in any portion of the site, temporary or permanent turfing measures, or other approved temporary stabilization of exposed areas, such as mulching, shall be accomplished within 14 days after construction is halted.

3.2 STRUCTURAL MEASURES

3.2.1 General

The temporary erosion and sediment control measures such as silt fences, check dams, and sedimentation basins shall be constructed and maintained until permanent drainage and erosion control facilities are complete and operative. Placement of perimeter controls shall commence with initiation of construction and shall remain in effect during the remainder of construction until final stabilization of those portions of the site upward of the perimeter control. Temporary erosion controls shall be maintained until final stabilization of exposed areas, after which they shall be removed. All structural devices shall be constructed in accordance with Standard Drawing 51/208.

3.2.2 Silt Fences

If used, silt fences shall be constructed along the channel top bank and along the toe and ends of each embankment in any location where stormwater may enter the stream or wetland, along inlet ditches, and any other areas necessary to minimize the entry of excavated material into the Mississippi River.

3.2.3 Check Dams

Check dams shall be constructed across inlet ditches, drains and swales using baled straw or equivalent devices to minimize sediment entry into streams. Check dams shall be inspected for sediment accumulation after each significant rainfall and sediment removed when it reaches one-half the height of the barrier. Sediment removal shall include removal and disposition in a location where it will not erode into construction areas, watercourses or wetlands.

3.2.4 Sediment Basins

Sediment from construction areas 10 or more disturbed acres at one time shall be trapped in temporary or permanent sediment basins. After each storm, the basins shall be allowed to settle for 24 to 48 hours after which the basins shall be pumped dry. In order to maintain basin effectiveness, accumulated sediment shall be removed when the depth of sediment reaches one-third of the depth of structure in any part of the pool. Overflow shall be controlled by paved weir, by vertical overflow pipe draining from the spillway and at the outlet toe of the spillway. The collected topsoil sediment shall be reused for fill on the construction site, and/or conserved for use at another site(s). If used, the basins shall provide at least 3,600 cubic feet of storage for each acre drained. Where such basins are used, other equivalent sediment control measures are required.

3.2.5 Other Measures

Other temporary erosion and sediment control measures such as berms, dikes, swales, and drains, may be used with, or in lieu of, the above mentioned measures provided they are consistent with Best Management Practices (BMPs). They shall be maintained until permanent drainage and erosion control facilities are completed and operative. Earthen erosion control features shall be compacted and stabilized immediately with vegetation as specified in paragraphs 4.1.3 and 4.1.4.

3.2.6 Velocity Dissipation Devices

Should drains or swales be used, they shall be constructed with velocity dissipation devices (check dams) to reduce the need for more stringent erosion control practices in the swale or drain. These devices shall be removed after the erosive areas have been stabilized.

4. CONTROL OF POLLUTANTS AFTER CONSTRUCTION

4.1 ESTABLISHMENT OF TURF

4.1.1 General

Turf shall be established as a permanent erosion control measure along the excavated reaches and excavated material embankments and any other areas which are disturbed during construction. All material embankments, all berm areas, and any other disturbed areas shall be turfed. Turf shall be established in accordance with the Contract Specifications.

4.1.2 Fertilizer

Fertilizer shall be distributed uniformly over the areas to be seeded at a rate which will supply no less than 40 pounds of available nitrogen, 40 pounds of available phosphorous, and 40 pounds of potash per acre.

4.1.3 Seeding

Seed sown for permanent turfing shall be as specified in the technical specifications. Temporary seeding shall consist of grasses appropriate for the season when they are sown. A satisfactory method of sowing shall be employed, using approved mechanical power-drawn seeders, mechanical hand-seeders, broadcast-seeders, or other approved methods. When conditions are such by reason of drought, high winds, excessive moisture, or other factors that satisfactory results are not likely to be obtained, work shall be halted as directed and resumed only when conditions are favorable or when approved alternative or corrective measures and procedures have been effected. If inspection either during seeding operations or after there is a show of green indicated that areas have been left unplanted, additional seed shall be sown.

4.1.4 Mulching

If used, mulch shall be materials that do not contain noxious grass or weed seed that might be detrimental to the turfing being established or to adjacent farmland. Mulch shall be spread uniformly in a continuous blanket, using 2 tons per acre of straw mulch or 1,200 pounds per acre of wood cellulose fiber mulch.

4.2 STATE AND LOCAL CONTROLS

There is no known State or local erosion and sediment control requirements applicable to this work other than those met by requirements of this permit.

5. RUNOFF COEFFICIENT, IMPERVIOUS AREAS, SOILS

The runoff coefficient immediately after construction is estimated to range between 0.10 and 0.30. Once the material embankment and other disturbed areas have been revegetated, the runoff coefficient should return to preconstruction conditions with no increase in impervious areas. Soils in the area consist of fat and lean clays with some sand and silty sands.

6. RECEIVING WATER

The receiving stream is the Mississippi River in Phillips County, Arkansas.

7. INSPECTIONS

7.1 GENERAL

Quality assurance representatives shall inspect disturbed areas of the construction site and areas used for storage of materials that are exposed to precipitation that have not been finally stabilized, structural control measures and locations where vehicles enter or exit the site every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater. Where sites have been stabilized, inspections shall be conducted at least once every month.

7.2 DISTURBED AREAS AND AREAS USED FOR MATERIAL STORAGE

Disturbed areas and areas used for material storage that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impact to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.

7.3 MODIFICATIONS OF POLLUTION PLAN

Based on the results of the inspection in paragraph 7.2, the site description identified in paragraphs 1 and 2 of this plan shall be revised as appropriate, but in no case more than 7 calendar days following the inspection. Such modifications shall provide for timely implementation of any changes to the plan within 7 calendar days following the inspection.

7.4 REPORTS

A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the Storm Water Pollution Prevention Plan (SWPPP), and actions taken shall be recorded and retained by the Contracting Officer as part of the SWPPP for at least (3) years from the date the site is finally stabilized.

8 DEFINITIONS

8.1 BEST MANAGEMENT PRACTICES (BMPs) Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operation procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

8.2 COMMENCEMENT OF CONSTRUCTION The initial disturbance of soils associated with clearing, grading, or excavating activities or other construction activities.

8.3 DRAINAGE SWALE A drainage way with a lining of grass, riprap, asphalt, concrete, or other material installed to convey runoff without causing erosion.

8.4 CHECK DAM Small temporary dams constructed across a swale or drainage ditch to reduce the velocity of runoff flows.

8.5 FINAL STABILIZATION All soil disturbing activities at the site have been completed, and a uniform perennial vegetative cover with a density of 85% of cover for the area has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed.

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01450	Project Signs, Barricades, and Traffic Control Signs
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DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01025

MEASUREMENT AND PAYMENT

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SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 SUBMITTALS (Not Used)

1.2 RELATED REQUIREMENTS

1.2.1 Contract Clauses

Payments under fixed price construction contracts.

1.2.2 Special Contract Requirements (Not Used)

1.3 LUMP SUM PAYMENT ITEMS

1.3.1 General

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

1.3.2 Lump Sum Items

(1) "Mobilization and Demobilization"

a. Payment will be made for costs associated with operations necessary for mobilization and demobilization as specified in Special Contract Requirements Clause 1.29.

b. Unit of measure: lump sum (LS).

(2) "Clearing"

a. Payment for clearing will be made at the contract lump sum price for "Clearing", which price and payment shall constitute full compensation for furnishing all plant, labor, material and equipment and performing all operations necessary for clearing of the areas specified herein or as indicated on the drawings; for removing and disposing of all cleared materials, all as specified in SECTION 02110. No reduction of the contract price will be made for areas within the areas specified to be cleared which require no clearing or which are partly cleared.

b. Unit of measure: lump sum (LS).

(3) "Aggregate Surfacing"

a. Payment will be made for costs associated with aggregate surfacing, as defined in SECTION 02546.

b. Unit of measure: lump sum (LS).

(4) "Guard Rail"

a. Payment will be made for costs associated with the installation of guard rail, as defined in SECTION 02800.

b. Unit of measure: lump sum (LS).

(5) "Environmental Protection"

a. Payment will be made for costs associated with operations necessary for environmental protection as specified in SECTION 01130 and Stormwater Pollution Prevention Plan as covered by SWPPP.

b. Unit of measure: lump sum (LS).

1.4 UNIT PRICE PAYMENT ITEMS

1.4.1 General

Payment items for the work of this contract on which the contract progress payments will be based are listed in the BIDDING SCHEDULE and described below. The unit price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, meeting safety requirements, tests and reports, and for performing all work required for each of the unit price items.

1.4.2 Unit Price Items

(1) "Excavation"

a. Measurement

A survey of the site for channel excavation will be made in accordance with the provisions of Special Contract Requirements Clause 1.10 "Quantity Surveys-Alternate I", and all measurement of excavation will be based on this survey. The quantity of excavation to be paid for will be computed between the ground surface, as determined by the above noted surveys, and the theoretical slope lines and grade lines for such excavation, as indicated on the drawings and/or specified herein. No allowance will be made for overdepth excavation, for the removal of any material outside the required side slope lines, nor for additional surveys for the removal of shoaling as specified above; except as provided in SECTION 02220.

b. Payment

Payment for excavation will be made at the contract unit price per cubic yard for "Excavation", which price and payment shall constitute full compensation for furnishing all plant, labor, material and equipment and performing all operations necessary for excavation; disposal of excavated materials in the disposal area; and all other operations incidental thereto all as specified in SECTION 02220.

c. Unit of measure: cubic yard (CY).

(2) "Fence, Chain-Link"

a. Measurement

Chain-link fence meeting the requirements of these specifications and acceptably installed shall be measured by the linear foot. Such measurement will be made in the field and will be based on the length installed as approved by the Contracting Officer.

b. Payment

Payment for chain-link fence will be made at the contract unit price for "Fence, Chain-Link", which price and payment shall constitute full compensation for furnishing and installing chain-link fence and gates; incidental excavation required for installation of post; concrete backfilling; and all operations incidental thereto; and as specified in SECTION 02831.

c. Unit of Measure: linear foot (LF)

(3) "Finish Dressing, Fertilizing, Seeding, and Mulching"

a. Measurement

Measurement of areas which require the combination of finish dressing, fertilizing, seeding, and mulching will be made in the field parallel to the surface.

b. Payment

Payment for finish dressing, fertilizing, seeding, and mulching will be made at the contract unit price per acre for "Finish Dressing, Fertilizing, Seeding, and Mulching", which price and payment shall constitute full compensation for finish dressing, fertilizing, seeding, and mulching as specified in SECTION 02935.

c. Unit of measure: acre (AC).

(4) "Bedding Material" and "Riprap R-90"

a. Measurement

If the materials are delivered by railroad, weights as acceptable to the railroad for freight charge purposes will be accepted as measurement of the materials. Copies of freight bills or certifications of weights acceptable to the railroad for freight charge purposes shall be furnished. If not delivered by railroad, but delivered by truck, the materials will be measured for payment, in the presence of a Government Inspector unless waived by the Contracting Officer, by being weighed on approved, accurately calibrated scales furnished by and at the expense of the Contractor. Weight certificates furnished by a public weighmaster where available will be acceptable in lieu of such procedure when authorized by the Contracting Officer. Individual weight tickets shall be furnished the Government Inspector at the time of delivery.

b. Payment

Payment for bedding material and riprap will be made at the applicable contract unit price per ton for "Bedding Material", and the applicable contract unit price per ton for "Riprap R-90", which price and payment shall include all costs of furnishing, hauling, handling, placing, maintaining the bedding material and riprap, and embedment for stone protection; all as specified in SECTION 02544.

c. Unit of measure: ton - 2,000 pounds (TN).

(5) "Corrugated Metal Pipe, 24-inch" and "Corrugated Metal Pipe, 48-inch"

a. Measurement

The culverts will be measured for payment by the linear foot. Such measurement will be made in the field and will be based on the length installed as determined and approved by the Contracting Officer.

b. Payment

Payment for the culverts will be made at the applicable contract unit price per linear foot for "Corrugated Metal Pipe, 24-inch," and "Corrugated Metal Pipe, 48-inch", which price and payment shall constitute full compensation for furnishing and installing the culverts; incidental excavation required for the removal of the existing culverts and installation of the new culverts; backfilling around and over the culverts; disposition of the existing culverts; and all other operations incidental thereto; all as specified in SECTION 02700 and as applicable to each individual culvert.

c. Unit of measure: linear foot (LF).

(6) "Steel Sheet Piling"

a. Sheet Piling

Payment for steel sheet piling quantities will be made at the applicable contract price per square foot for "Steel Sheet Piling, Type PZ 22," which applicable price shall include all cost of furnishing, driving, trimming the tops of piles as specified in SECTION 02350 paragraph 3.1, cutting holes, and all other material and work incidental thereto. When piles which have not been driven to penetration depths shown on drawing are directed to be cut off, except for cut-offs due to excessive battering, a lump sum payment of \$10.00 will be made for cutting off each pile, plus an additional sum will be paid for each square foot of the portion cut off and measured for payment as stipulated in paragraph 1.4.2(6) d below in the amount of 50 percent of the full applicable contract unit price.

b. Splices

A payment of \$25.00 will be made for each welded pile splice made at the direction of the Contracting Officer to drive piles to depths greater than the predetermined lengths and to extend these piles to the indicated top of pile elevation shown on the drawing.

c. Pulled Piles

Piles which are directed to be pulled and found to be in good condition will be paid for at the applicable contract price for furnishing and driving the pile in its original position plus an equal amount for the cost of pulling.

Such pulled piles when redriven will be paid for at 50 percent of the applicable contract unit price for that portion of the pile redriven below cut-off elevation. This price constitutes payment for redriving only; the cost of furnishing, initial driving and pulling the piles is to be paid for as specified above. When piles are pulled and found to be damaged, no payment will be made for originally furnishing and driving such piles, nor for the operation of pulling. Piles replacing damaged piles will be paid for at the applicable contract unit price for the lengths driven.

d. Measurement

The length of each pile driven will be measured to the nearest tenth of a linear foot. When driven piles are directed to be cut off before reaching the penetration depths shown on the drawing, that portion cut off will be measured for payment as the difference between the total length of piles shown on the drawing for that location and the length of piles driven below the point of cut-off. No deduction will be made for holes cut for drains and utilities, in computing the area of steel sheet pile structures.

e. Unit of measure: square foot (SF)

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

-- End of Section --

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01130

ENVIROMENTAL PROTECTION

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SECTION 01130

ENVIRONMENTAL PROTECTION

PART 1 GENERAL

1.1 DEFINITIONS

For the purpose of this specification, environmental pollution and damage is defined as 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 man; or degrade the utility of the environment for aesthetic, cultural and/or historical purposes. The control of environmental pollution and damage requires consideration of air, water, and land, and includes management of visual aesthetics, noise, solid waste, radiant energy and radioactive materials, as well as other pollutants.

1.2 ENVIRONMENTAL PROTECTION REQUIREMENTS

Provide and maintain, during the life of the contract, environmental protection. Plan for and provide environmental protective measures to control pollution that develops during normal construction practice. Plan for and provide environmental protective measures required to correct conditions that develop during the construction of permanent or temporary environmental features associated with the project. Comply with Federal, State, and local regulations pertaining to the environment, including but not limited to water, air, and noise pollution.

1.2.1 Environmental Protection Plan

Within 21 days after receipt of Notice of Award of the contract, the Contractor shall submit in writing an Environmental Protection Plan and, prior to starting work, and meet with representatives of the Contracting Officer to develop mutual understanding relative to compliance with this provision and administration of the environmental protection program. Approval of the Contractor's plan will not relieve the Contractor of his responsibility for adequate and continuing control of pollutants and other environmental protection measures. The Government reserves the right to make changes in his environmental protection plan and operations as necessary to maintain satisfactory environmental protection performance. The Environmental Protection Plan shall include but not be limited to the following:

1.2.1.1 Protection of Features

The Contractor shall determine methods for the protection of features to be preserved within authorized work areas. The Contractor shall prepare a listing of methods to protect resources needing protection, i.e., trees, shrubs, vines, grasses and ground cover, landscape features, air and water quality, fish and wildlife, soil, historical, archaeological and cultural resources.

1.2.1.2 Procedures

The Contractor shall implement procedures to provide the required environmental protection and to comply with the applicable laws and regulations. The Contractor shall set out the procedures to be followed to correct pollution of the environment due to accident, natural causes or failure to follow the procedures set out in accordance with the Environmental Protection Plan.

1.2.1.3 Permit or License

The Contractor shall obtain all needed permits or licenses.

1.2.1.4 Drawings

The Contractor shall include drawings showing locations of any proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures, sanitary facilities, stockpiles of earth materials, and disposal areas for excess earth material and unsatisfactory earth materials.

1.2.1.5 Environmental Monitoring Plans

The Contractor shall include environmental monitoring plans for the job site which incorporate land, water, air and noise monitoring.

1.2.1.6 Traffic Control Plan

The Contractor shall include a traffic control plan for the job site.

1.2.1.7 Surface and Ground Water

The Contractor shall establish methods of protecting surface and ground water during construction activities.

1.2.1.8 Work Area Plan

The Contractor shall include a work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. The plan shall include measures for marking the limits of use areas.

1.2.1.9 Plan of Borrow Area(s)

The Contractor shall include a plan of borrow area(s) for the job site.

1.3 SUBCONTRACTORS

Assurance of compliance with this section by subcontractors will be the responsibility of the Contractor.

1.4 PERMITS OBTAINED BY CORPS OF ENGINEERS

The Corps of Engineers will not obtain any permits for this project. See Contract Clause entitled "PERMITS AND RESPONSIBILITIES".

1.5 REGULATORY REQUIREMENTS

The Contractor shall comply with all state regulatory and statutory requirements.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 PROTECTION OF ENVIRONMENTAL RESOURCES

The environmental resources within the project boundaries and those affected outside the limits of permanent work under this contract shall be protected during the entire period of this contract. The Contractor shall confine his activities to areas defined by the contract drawings or specifications. Environmental protection shall be as stated in the following subparagraphs.

3.1.1 Protection of Land Resources

Prior to the beginning of any construction, the Contracting Officer will identify all land resources to be preserved within the Contractor's work area. The Contractor shall not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, top soil, and land forms without special permission from the Contracting Officer. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized. Where such special emergency use is permitted, the Contractor shall provide effective protection for land and vegetation resources at all times as defined in the following subparagraphs.

3.1.1.1 Work Area Limits

Prior to any construction, the Contractor shall mark the areas where no work is to be performed under this contract. Isolated areas within the general work area which are to be saved and protected shall also be marked or fenced. Monuments and markers shall be protected before construction operations commence and during all construction operations. Where construction operations are to be conducted during darkness, the markers shall be visible during darkness. The Contractor shall convey to his personnel the purpose of marking and/or protection of all necessary objects.

3.1.1.2 Protection of Landscape

Trees, shrubs, vines, grasses, land forms and other landscape features to be preserved, indicated and defined on the drawings submitted by the Contractor as a part of the Environmental Protection Plan, shall be clearly identified by marking, fencing, or wrapping with boards, or any other approved techniques.

3.1.1.3 Reduction of Exposure of Unprotected Erodible Soils

Earthwork brought to final grade shall be finished as indicated and specified. Side slopes and back slopes shall be protected as soon as practicable upon completion of rough grading. All earthwork shall be planned and conducted to minimize the duration of exposure of unprotected soils. Except in instances where the constructed feature obscures borrow areas,

quarries and waste material areas, these areas shall not initially be cleared in total. Clearing of such areas shall progress in reasonably sized increments as needed to use the areas developed as approved by the Contracting Officer.

3.1.1.4 Temporary Protection of Disturbed Areas

Such methods as necessary shall be utilized to effectively prevent erosion and control sedimentation, including but not limited to the following:

a. Retardation and Control of Runoff

Runoff from the construction site shall be controlled by construction of diversion ditches, benches, and berms to retard and divert runoff to protected drainage courses, and the Contractor shall also utilize any measures required by area-wide plans approved under Paragraph 208 of the Clean Water Act.

3.1.1.5 Erosion and Sedimentation Control Devices

The Contractor shall construct or install all temporary and permanent erosion sedimentation control features. Temporary erosion and sediment control measures such as berms, dikes, drains, sedimentation basin, grassing and mulching shall be maintained until permanent drainage and erosion control facilities are completed and operative.

3.1.1.6 Location of Contractor Facilities

The Contractor's field offices, staging areas, stockpiles, storage, and temporary buildings shall be placed in areas designated on the contract drawings and approved by the Contracting Officer. Temporary movement or relocation of Contractor facilities shall be made only on approval by the Contracting Officer.

3.1.1.7 Borrow Areas on Government Property

Borrow areas on Government property shall be managed to minimize erosion and to prevent sediment from entering nearby water courses or lakes.

3.1.1.8 Disposal Areas on Government Property

Disposal areas on Government property shall be managed and controlled to limit material to areas designated on the contract drawings and prevent erosion of soil or sediment from entering nearby water courses or lakes. Disposal areas shall be developed in accordance with the grading plan indicated on the contract drawings.

3.1.1.9 Temporary Excavation and Embankments

Temporary excavation and embankments shall be controlled to protect adjacent areas from contamination.

3.1.1.10 Disposal of Solid Wastes

Solid wastes (excluding clearing debris) shall be placed in containers which are emptied on a regular schedule. All handling and disposal shall be conducted to prevent contamination. The Contractor shall transport all solid

waste off Government property and dispose of it in compliance with Federal, State, and local requirements for solid waste disposal.

3.1.1.11 Disposal of Chemical Wastes

Chemical wastes shall be stored in corrosion resistant containers, removed from the work area and disposed of in accordance with Federal, State, and local regulations.

3.1.1.12 Disposal of Discarded Materials

Discarded materials other than those which can be included in the solid waste category shall be handled as directed by the Contracting Officer.

3.2 HISTORICAL, ARCHAEOLOGICAL AND CULTURAL RESOURCES

Existing historical, archaeological and cultural resources within the Contractor's work area will be so designated by the Contracting Officer and precautions shall be taken by the Contractor to preserve all such resources as they existed at the time they were pointed out to the Contractor. The Contractor shall install all protection for these resources so designated on the contract drawings and shall be responsible for their preservation during this contract. If during construction items of apparent archaeological or historical interest are discovered, they shall be left undisturbed and the Contractor shall report the find immediately to the Contracting Officer.

3.3 PROTECTION OF WATER RESOURCES

The Contractor shall keep construction activities under surveillance, management and control to avoid pollution of surface and ground waters. Special management techniques as set out below shall be implemented to control water pollution by the listed construction activities which are included in this contract.

3.3.1 Cofferdam and Diversion Operations

The Contractor shall plan his operations and perform all work necessary to minimize adverse impact or violation of the water quality standard. Construction operations for dewatering, removal of cofferdams, tailrace excavation, and tunnel closure shall be controlled at all times to limit impact of water turbidity on the habitat for wildlife and impacts on water quality for downstream use.

3.3.2 Stream Crossings

Stream crossings shall be controlled during construction. Crossings shall provide movement of materials or equipment which do not violate water pollution control standards of the Federal, State or local government.

3.3.3 Monitoring of Water Areas Affected by Construction Activities

Monitoring of water areas affected by construction activities shall be the responsibility of the Contractor. All water areas affected by construction activities shall be monitored by the Contractor.

3.4 PROTECTION OF FISH AND WILDLIFE RESOURCES

The Contractor shall keep construction activities under surveillance, management and control to minimize interference with, disturbance to and damage of fish and wildlife. Species that require specific attention along with measures for their protection shall be listed by the Contractor prior to beginning of construction operations.

3.5 PROTECTION OF AIR RESOURCES

The Contractor shall keep construction activities under surveillance, management and control to minimize pollution of air resources. All activities, equipment, processes, and work operated or performed by the Contractor in accomplishing the specified construction shall be in strict accordance with the laws of the state or states in which the work is being done and all Federal emission and performance laws and standards. Special management techniques as set out below shall be implemented to control air pollution by the construction activities which are included in the contract.

3.5.1 Particulates

Dust particles, aerosols, gaseous by-products from all construction activities, 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 all excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and all other work areas within or outside the project boundaries free from particulates which would cause the air pollution standards mentioned in the paragraph "PROTECTION OF AIR RESOURCES" to be exceeded or which would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, light bituminous treatment, baghouse, scrubbers, electrostatic precipitators or other methods will be permitted to control particulates in the work area. Sprinkling, to be efficient, must be repeated at such intervals as to keep the disturbed area damp at all times. The Contractor must have sufficient competent equipment available to accomplish this task. Particulate control shall be performed as the work proceeds and whenever a particulate nuisance or hazard occurs.

3.5.2 Hydrocarbons and Carbon Monoxide

Hydrocarbons and carbon monoxide emissions from equipment shall be controlled to Federal and State allowable limits at all times.

3.5.3 Odors

Odors shall be controlled at all times for all construction activities, processing and preparation of materials.

3.5.4 Monitoring Air Quality

Monitoring of air quality shall be the responsibility of the Contractor. All air areas affected by the construction activities shall be monitored by the Contractor.

3.6 INSPECTION

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with the Contractor's environmental protection plan. The Contractor shall, after receipt of such notice, inform the Contracting Officer of proposed corrective action and take such action as may be approved. If the Contractor fails 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 time extensions will be granted or costs or damages allowed to the Contractor for any such suspension.

3.7 POST CONSTRUCTION CLEANUP

The Contractor shall clean up all area(s) used for construction.

3.8 RESTORATION OF LANDSCAPE DAMAGE

The Contractor shall restore all landscape features damaged or destroyed during construction operations outside the limits of the approved work areas. Such restoration shall be in accordance with the plans submitted for approval by the Contracting Officer.

3.9 MAINTENANCE OF POLLUTION FACILITIES

The Contractor shall maintain all constructed facilities and temporary pollution control devices for the duration of the contract or for that length of time construction activities create the particular pollutant.

3.10 TRAINING OF CONTRACTOR PERSONNEL IN POLLUTION CONTROL

The Contractor shall train his personnel in all phases of environmental protection. The training shall include methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, and installation and care of facilities (vegetative covers and instruments required for monitoring purposes) to insure adequate and continuous environmental pollution control.

-- End of Section --

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01330

SUBMITTAL PROCEDURES

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SECTION 01330

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SUBMITTAL IDENTIFICATION

SD-01 Data

SD-04 Drawings

SD-06 Instructions

SD-07 Schedules

SD-08 Statements

SD-09 Reports

SD-13 Certificates

SD-14 Samples

SD-18 Records

SD-19 Operation and Maintenance Manuals

1.2 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

1.2.1 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."

1.2.2 Information Only

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.

1.3 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 an error that may exist, as the Contractor 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,

resubmitting for the purpose of substituting materials or equipment will not be considered unless accompanied by an explanation of why a substitution is necessary.

1.4 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.

1.5 WITHHOLDING OF PAYMENT

Payment for materials incorporated in the work will not be made if required approvals have not been obtained.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 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) representative and each item shall be stamped, signed, and dated by the CQC representative 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.

3.2 SUBMITTAL REGISTER (ENG FORM 4288-R)

At the end of this section is one set of ENG Form 4288-R listing 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. A copy of ENG Form 4288-R is also included at the end of this section. The Contractor will also be given the submittal register as a diskette containing the computerized ENG Form 4288-R and instructions on the use of the diskette. Columns "d" through "q" have been completed by the Government; the Contractor shall complete columns "a" and "r" through "t" and

submit the forms (hard copy plus associated electronic file) to the Contracting Officer for approval within 15 calendar days after Notice to Proceed. The Contractor shall keep this diskette up-to-date and shall submit it to the Government together with the monthly payment request. The approved submittal register will become the scheduling document and will be used to control submittals throughout the life of the contract. The submittal register and the progress schedules shall be coordinated.

3.3 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 15 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. Government approval times should be 30 days for correct submittals or 60 days for deviating submittals

3.4 TRANSMITTAL FORM (ENG FORM 4025-R)

The sample transmittal form (ENG Form 4025-R) 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.

3.5 SUBMITTAL PROCEDURE

Submittals shall be made as follows:

3.5.1 Procedures

Submittals shall be prepared as specified with the required number of copies and delivered to:

3.5.2 Deviations

For submittals which include proposed deviations requested by the Contractor, the column "variation" of ENG Form 4025-R 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.

3.6 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."

3.7 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. Four copies of the submittal will be retained by the Contracting Officer and two (2) copies of the submittal will be returned to the Contractor.

3.8 INFORMATION ONLY SUBMITTALS

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

3.9 STAMPS

Stamps used by the Contractor on the submittal data to certify that the submittal meets contract requirements shall be similar to that shown on the following page:

CONTRACTOR

(Firm Name)

_____ Approved

_____ Approved with corrections as noted on submittal
data and/or attached sheets(s)

SIGNATURE: _____

TITLE: _____

DATE: _____

End of Section

SUBMITTAL REGISTER (ER 415-1-10)																	CONTRACT NO.								
TITLE AND LOCATION MAIN OUTLET DITCH, REACH 1A, HELENA, ARKANSAS											CONTRACTOR					SPECIFICATION SECTION									
ACTIVITY NO.	TRANS-MITTAL NO.	ITEM NO.	SPECIFICATION PARAGRAPH NUMBER	DESCRIPTION OF ITEM SUBMITTED	TYPE OF SUBMITTAL										CONTRACTOR SCHEDULE DATES			CONTRACTOR ACTION		GOVERNMENT ACTION	REMARKS				
					DRAWINGS	INSTRUMENTS	STATEMENTS	CERTIFICATES	INFORMATIONS	GOVERNMENT	REVIEWS	SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	DATE	SUBMIT TO GOVERN- MENT	DATE								
a.	b.	c.	d.	e.	f.	g.	h.	i.	j.	k.	l.	m.	n.	o.	p.	q.	r.	s.	t.	u.	v.	w.	x.	y.	z.
		1	02245-2.1.1.1.1	Samples (Aggregate Base Course)								X	X		C										
		2	02245-2.1.1.1.2	Testing (Materials)							X			X	C										
		3	02350-1.4	Submittals (Equipment)	X									X	C										
		4	02350-1.4.2	Certificate (Piling)							X	X			C										
		5	02544-2.1.2	Certified Test Report							X	X	X		C										
		6	02544-2.2.2	Test Reports (Stone)						X	X		X		C										
		7	02546-2.2.2	Certified Test (Aggregate)											X	C									
		8	02700-2.1.1	Manufacturer's Certified Statement							X		X		C										
		9	02800-2.1.4	Certificate (Materials)							X		X		C										
		10	02831-1.4.1	Detail Drawings		X							X		C										
		11	02831-2.1.1.2	Gates		X							X		C										
		12	02831-2.1.4	Padlocks	X								X		C										
		13	02935-1.4.1	Invoice from Suppliers (Fertilizer)									X		C										
		14	02935-1.4.2	Certification Statements (Seed)						X		X			C										
		15	02935-1.4.3	Samples (Mulch)							X	X			C										
		16	02935-2.1.4.2	Wood Cellulose Fiber Mulch (if requested)						X		X			C										

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE <i>(Read instructions on the reverse side prior to initiating this form)</i>	DATE	TRANSMITTAL NO.
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SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS *(This section will 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 RESUBMITTAL OF TRANSMITTAL _____
SPECIFICATION SEC. NO. <i>(Cover only one section with each transmittal)</i>	PROJECT TITLE AND LOCATION		CHECK ONE: THIS TRANSMITTAL IS FOR <input type="checkbox"/> FIO <input type="checkbox"/> GOV'T. APPROVAL

ITEM NO.	DESCRIPTION OF ITEM SUBMITTED <i>(Type size, model number/etc.)</i>	MFG OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. <i>(See instruction no. 8)</i>	NO. OF COPIES	CONTRACT REFERENCE DOCUMENT		FOR CONTRACTOR USE CODE	VARIATION <i>(See instruction No. 6)</i>	FOR CE USE CODE
				SPEC. PARA. NO. <i>e.</i>	DRAWING SHEET NO. <i>f.</i>			
<i>a.</i>	<i>b.</i>	<i>c.</i>	<i>d.</i>	<i>e.</i>	<i>f.</i>	<i>g.</i>	<i>h.</i>	<i>i.</i>

REMARKS	I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as other wise stated. <hr style="width: 80%; margin-left: auto; margin-right: 0;"/> NAME AND SIGNATURE OF CONTRACTOR
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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 transmittal shall be numbered consecutively in the space provided for "Transmittal No.". This number, in addition to the contract number, will form a serial number for identifying each submittal. For new submittals or resubmittals mark the appropriate box; on resubmittals, insert transmittal number of last submission as well as the new submittal number.
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 (<i>Specify</i>)

10. Approval of items does not relieve the contractor from complying with all the requirements of the contact plans and specifications.

(Reverse of ENG Form 4025-R)

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01450

PROJECT SIGNS, BARRICADES, AND TRAFFIC CONTROL SIGNS

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SECTION 01450

PROJECT SIGNS, BARRICADES, AND TRAFFIC CONTROL SIGNS

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing, erecting, maintaining, and removing project signs, barricades, and traffic control signs.

1.2 PROJECT SIGNS

The Contractor shall furnish, erect, and maintain two single faced project signs at the location designated by the Contracting Officer. The signs shall be constructed of 3/4-inch marine grade plywood, 3/4-inch A-C exterior plywood, or 22 gage metal, mounted on a substantial framework of 2-inch material. Size, lettering, color and paint shall conform to the details shown on the drawing "Temporary Project Sign" included at the end of this section. In lieu of two signs, the Contractor may double-face a single sign at the specified location, provided such a sign and its erection and supports are approved by the Contracting Officer. Upon request, the Government will furnish without cost to the Contractor two decals of the Engineer Castle. The signs shall be erected as soon as practicable, but not later than 15 calendar days after the date established for commencement of work. The signs shall be removed upon completion of all other construction work under the contract and will become the property of the Contractor.

1.3 BARRICADES AND TRAFFIC CONTROL SIGNS

Barricades and traffic control signs shall be those as needed or required and shall conform to the "Manual on Uniform Traffic Control Devices for Streets and Highways," Current Edition.

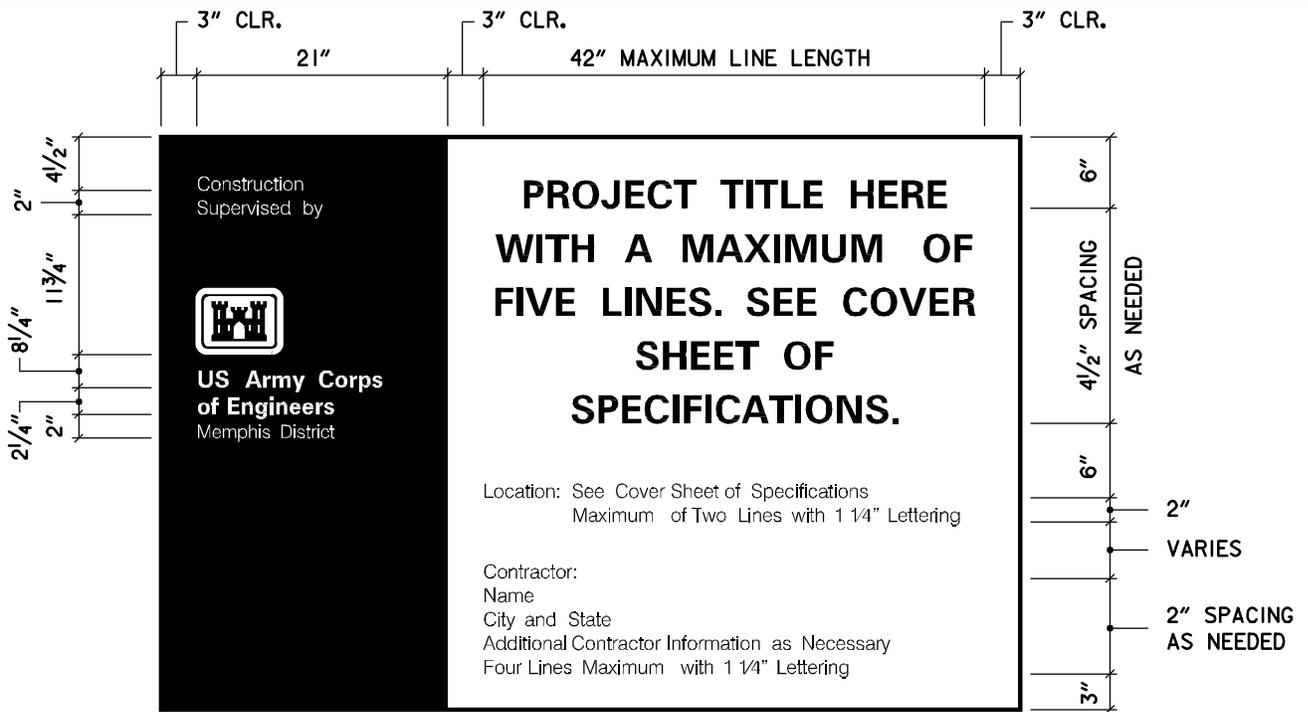
1.4 PAYMENT

No separate payment will be made for erecting, maintaining and removing projects signs, barricades, and traffic control signs, and all costs in connection therewith will be considered an incidental obligation of the Contractor.

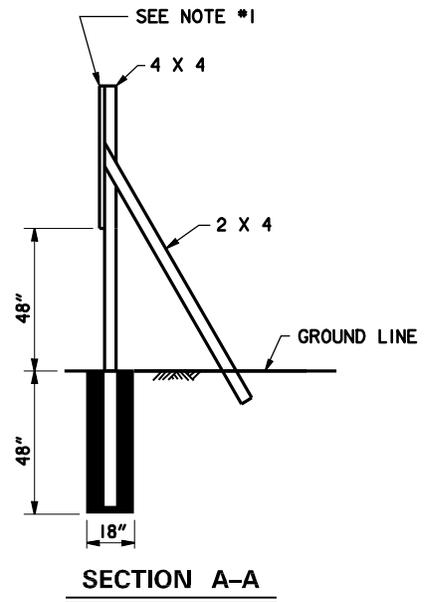
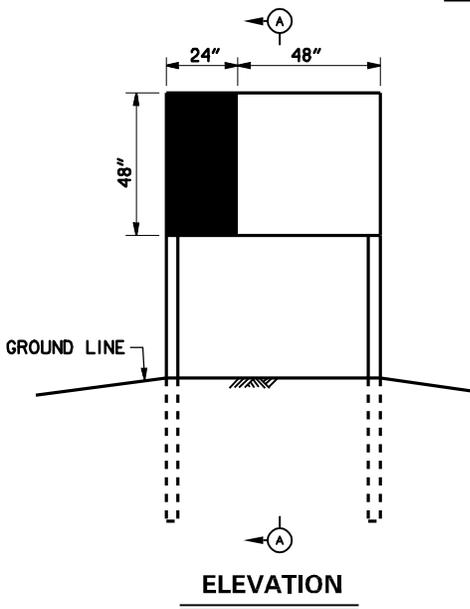
PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

--End of Section--



ELEVATION



SPECIFICATIONS

1. SIGN PANEL SHALL BE 4' x 6' x 3/4" EXTERIOR GRADE PLYWOOD OR 22 GAGE SHEET METAL.
2. POSTS AND BRACING SHALL BE TREATED, NO.1 GRADE YELLOW PINE.
3. ALL EXPOSED SURFACES SHALL BE GIVEN ONE COAT OF LINSEED OIL AND WIPED PRIOR TO PRIMING.
4. ALL EXPOSED SURFACES SHALL BE GIVEN ONE COAT OF WHITE AS PRIMER. SECOND COAT SHALL BE COMMUNICATIONS RED ON LEFT AND WHITE ELSEWHERE.
5. THE LEFT SECTION SHALL BE RED WITH WHITE LEGEND. THE RIGHT SECTION SHALL BE WHITE WITH BLACK LEGEND.
6. PAINT SHALL BE BENJAMIN MOORE NO. 120-60 POLY-SILICONE ENAMEL OR APPROVED EQUAL.
7. ALL LETTERING SHALL BE 1/4" WITH A TWO INCH LETTER SPACING UNLESS NOTED OTHERWISE. THE WORDS "US Army Corps of Engineers" SHALL BE 1/2" TALL. THE PROJECT TITLE LETTERING SHALL BE A MINIMUM OF 1/2" TALL AND A MAXIMUM OF 3/2" TALL. THE LETTERING SIZE SHALL BE CHOSEN SUCH THAT LARGEST POSSIBLE LETTERS ARE USED WITHOUT EXCEEDING A MAXIMUM LINE LENGTH OF 42". THE NUMBER OF LINES IN THE PROJECT TITLE SHALL MATCH THAT SHOWN ON THE COVER SHEET OF THE SPECIFICATIONS.

SCALE: NONE

JANUARY 1999

U.S. ARMY ENGINEER DISTRICT, MEMPHIS
CORPS OF ENGINEERS
MEMPHIS, TENNESSEE

**TEMPORARY
PROJECT SIGN**

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01451

CONTRACTOR QUALITY CONTROL

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SECTION 01451

CONTRACTOR QUALITY CONTROL

PART 1 GENERAL

1.1 REFERENCES

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

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 3740 (1994a) 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 (1993b) 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.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL

The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the Contract Clause entitled "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 construction operations, both on-site and off-site, and shall be keyed to the proposed construction sequence.

3.2 QUALITY CONTROL PLAN

3.2.1 General

The Contractor shall furnish for review by the Government, not later than 21 calendar days after receipt of Notice of Award of the contract, the Contractor Quality Control (CQC) Plan proposed to implement the requirements of the Contract Clause entitled "Inspection of Construction." The plan shall identify personnel, procedures, control, instructions, test, records, and forms to be used. The Government will consider an interim plan for the first 15 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.

3.2.2 Content of the CQC Plan

The CQC plan shall include, as a minimum, the following to cover all construction operations, both on-site and off-site, 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 will also be furnished to the Government.

d. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, off-site fabricators, suppliers, and purchasing agents. These procedures shall be in accordance with SPECIAL CONTRACT REQUIREMENT entitled "Submittals".

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 will be approved by the Contracting Officer.)

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 will 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 and has separate control requirements. It could be identified by different trades or disciplines, or it could 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 feature under a particular section. This list will be agreed upon during the coordination meeting.

3.2.3 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.

3.2.4 Notification of Changes

After acceptance of the QC plan, the Contractor shall notify the Contracting Officer in writing a minimum of seven calendar days prior to 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 Quality Control Plan, the Contractor shall meet with the Contracting Officer or Authorized Representative and discuss the Contractor's quality control system. 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 on-site and off-site 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 CQC System Manager

The Contractor shall identify an individual within his organization at the worksite who shall be responsible for overall management of CQC and have the

authority to act in all CQC matters for the Contractor. This CQC System Manager shall be subject to acceptance by the Contracting Officer. The CQC System Manager shall be assigned as System Manager but may have other duties in addition to quality control.

3.4.2 CQC Staff

A staff shall be maintained under the direction of the CQC System Manager to perform all CQC activities. An alternate will be identified to serve in the absence of the CQC System Manager. The staff must be of sufficient size to ensure adequate CQC 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 CQC responsibilities and must be allowed sufficient time to carry out these responsibilities. The CQC plan will clearly state the duties and responsibilities of each staff member. All CQC Staff members or replacements shall be subject to acceptance by the Contracting Officer.

3.4.3 Additional Requirement

In addition to the above requirements, the CQC System Manager and his alternate shall have completed the course entitled "Construction Quality Management for Contractors". This course is periodically offered by the Memphis District as well as other Corps Districts.

3.5 SUBMITTALS

Submittals shall be in accordance with SPECIAL CONTRACT REQUIREMENT entitled "Submittals". The CQC organization shall be responsible for certifying that all submittals are in compliance with the contract requirements.

3.6 CONTROL

The controls shall include at least three phases of control to be conducted by the CQC System Manager for all definable features of work, as follows:

3.6.1 Preparatory Phase

This phase shall be performed prior to beginning work on each definable feature of work and shall include:

- a. A review of each paragraph of applicable specifications.
- 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. A check to assure that provisions 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 constructing the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that phase 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. The Government shall be notified at least 24 hours in advance of beginning any of the required action of the preparatory 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 preliminary work to ensure that it is in compliance with contract requirements. Review minutes of the preparatory meeting.

b. Verification of 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 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 24 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 on-site, or any time acceptable specified quality standards are not being met.

3.6.3 Follow-up Phase

Daily checks shall be performed to assure continuing compliance with contract requirements, including control testing, 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 or conceal non-conforming work.

3.6.4 Additional Preparatory and Initial Phases

As determined by the Government, additional preparatory and initial phases may 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, on-site 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. 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, will 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 will 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 off-site or

commercial test facility will 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 Contracting Officer 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 a charge 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. There will be no extension of time allowed due to necessity to perform capability rechecks.

3.7.3 On-Site Laboratory

The Contracting Officer 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 will be borne by the Contractor. Samples of materials for test verification and acceptance testing by the Government shall be delivered by the Contractor to a location specified by the Contracting Officer.

3.8 COMPLETION INSPECTION

At the completion of all work or any increment thereof established by a completion time stated in the Special Contract Requirements entitled "Commencement, Prosecution, and Completion of Work," or stated elsewhere in the specifications, the CQC System Manager shall conduct an inspection of the work and develop a "punch list" of items which do not conform to the approved drawings and specifications. Such a list of deficiencies shall be included in the CQC documentation, as required by paragraph DOCUMENTATION below, and 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 and so notify the Government. These inspections and any deficiency corrections required by this paragraph will be accomplished within the time stated for completion of the entire work or any particular increment thereof if the project is divided into increments by separate completion dates.

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 should be identified (Preparatory, Initial, Follow-up). List 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 reviewed, with contract reference, by whom, and action taken.
- g. Off-site surveillance activities, including actions taken.
- h. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
- i. Instructions given/received and conflicts in plans and/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 Government daily within 24 hours after 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 seven 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 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 worksite, 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.

-- End of Section --

DIVISION 2 - SITE WORK

SECTION 02110

CLEARING

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SECTION 02110

CLEARING

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all plant, labor, equipment, and materials, and performing all operations necessary for clearing as specified herein. Such work includes clearing and disposal of debris therefrom; bridge removal; asphalt street removal; existing building removal; and performing all work incidental thereto.

1.2 QUALITY CONTROL

The Contractor shall establish and maintain quality control for the work specified in this section to assure compliance with contract requirements and maintain records of his quality control for all construction operations including but not limited to the following:

(1) Clearing. Location, heights, limits, removal of lodgments in channel.

(2) Disposal of Cleared Materials. Removal and disposition of materials.

(3) Removal of Asphalt Street. Removal and disposition of materials, limits, elevation, cross section.

(4) Removal of Building. Removal and disposal of materials, location, limits.

(5) Removal of Bridge. Removal and disposition of materials, location, method.

A copy of these records and tests, as well as the records of corrective action taken, shall be furnished the Government.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 CLEARING

3.1.1 General

Clearing between Stations 103+46 to 105+28 and Stations 107+55 to 140+67 shall consist of the removal of all timber, standing or felled in previous cuttings, snags, stumps from previous cuttings, rootwads, bushes, partially buried logs, and debris from clearing operations, driftwood, old pilings, or non-organic debris, and other debris in areas and to the extent specified hereinbelow. All clearing shall be maintained at least 1,000 feet in advance of excavation work.

3.1.2 Areas to be Cleared

Within the station limits of work, the following areas shall be cleared:

(1) Areas within the finished slope lines of channel excavation where actual excavation is required.

(2) Any trees on the opposite bank from the excavation that are leaning and are likely to fall into the channel.

Within areas requiring clearing, but outside excavation limits, all growth, stumps, partially buried logs, snags, and other projections, shall be removed by uprooting or shall be cut off flush with the existing and/or excavated surfaces, as applicable. Within areas of the existing channel where channel excavation is required all growth, stumps, partially buried logs, snags, and other projections shall be removed by uprooting.

3.1.3 Removal of Rafted Driftwood and Maintenance of Channel

Within the station limits of the work, all floating rafts or other lodgments and accumulation of driftwood which exist at the beginning of the contract period or which may form during the life of the contract within portions of the existing or improved ditch shall be removed and disposed of as prescribed for other clearing debris below. Prior to the commencement and removal of such rafted driftwood, the Contractor shall install traps or other suitable devices to prevent the rafts from being dislodged and floating away. The cutting and/or removal of logs and other pieces which key the rafts together shall be last in order of removal.

3.1.4 Miscellaneous

Clearing in areas within the right-of-way limits which are not specified hereinabove to be cleared shall be only that necessary for construction purposes and operation of equipment, and shall be subject to the approval of the Contracting Officer. Optimum effort shall be exercised by the Contractor to preserve as many trees as practicable outside the required clearing areas.

3.2 DISPOSAL OF CLEARING DEBRIS

3.2.1 General

All debris resulting from clearing operations on this contract shall be disposed of by removal from the site. All debris resulting from bridge removal, asphalt street removal, building removal, and any inorganic materials removed shall become the property of the Contractor and be disposed of as specified in 3.2.2 below. The Contractor shall make a reasonable effort to utilize this last method to channel materials of value resulting from clearing operations into beneficial use. The Contractor shall obtain an approved hauling route through the city of Helena, Arkansas, as approved by the Contracting Officer.

3.2.2 Removal from Site

The Contractor shall remove all debris resulting from clearing operations from the site of the work. Such disposal shall comply with all applicable Federal, State and local laws. The Contractor may, at his option retain for his own use or disposal by sale or otherwise any such materials of value. The Government assumes no responsibility for the protection or safekeeping of any materials retained by the Contractor. Such materials shall be removed from the site of the work before the date of completion of the work under this contract. The locations and manner of placement of clearing debris on the right-of-way by the Contractor for his convenience prior to removal of the debris from the site of the work shall be subject to the approval of the Contracting Officer. When debris from clearing operations is placed on adjacent property, the Contractor shall obtain, without cost to the Government, additional rights-of-way for such purpose. Such material shall be placed so as not to interfere with roads, drainage, or other improvements and in such a manner as to eliminate the possibility of its entering the channel.

3.3 ASPHALT STREET REMOVAL

The Contractor shall remove an existing asphalt street (Pacific Street) between approximate Station 116+00 and Station 137+87 as indicated on the drawings. All materials resulting from removal of asphalt street shall become the property of the Contractor and shall be disposed of as specified for clearing debris in 3.2 above.

3.4 BUILDING REMOVAL

The Contractor shall remove an existing building located at approximate Station 125+29. All materials resulting from removal of building shall become the property of the Contractor and shall be disposed of as specified for clearing debris in 3.2 above.

3.5 BRIDGE REMOVAL

All parts of the existing abandon bridge at approximate Station 117+00 shall be removed by the Contractor. The piling shall be pulled or cut off flush with the excavated ground surfaces. The materials resulting from removal of the bridge shall become the property of the Contractor and shall be disposed of as specified for clearing debris in 3.2 above.

-- End of Section --

DIVISION 2 - SITE WORK

SECTION 02220

EXCAVATION

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SECTION 02220

EXCAVATION

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all plant, labor, equipment, and materials, and performing all operations necessary for excavation to the lines and grades indicated therefor on the drawings, and/or specified herein. Such work includes channel excavation, inlet drain and lateral ditch excavations, and disposal of excavated material; and performing all work incidental thereto. Incidental excavation required for removal and installation of corrugated metal pipe culverts is covered in SECTION 02700 - CULVERT REMOVAL AND INSTALLATION.

1.2 QUALITY CONTROL

The Contractor shall establish and maintain quality control for the work specified in this section to assure compliance with contract requirements and maintain records of his quality control for all construction operations including but not limited to the following:

(1) Excavation. Layout, bottom grades and widths, side slopes, inlet drains, riprap paved inlet drains, excavation for placement of stone protection, transitions.

(2) Disposal of Excavated Material. Layout, limits, maximum elevations, restricted areas, drainage, slopes, minimum elevations.

(3) Slides and Shoals. Location, limits, methods and equipment used where remedial work has been directed.

(4) Existing Channel. Temporary traps to catch drift, location, limits, right-of-way agreements between the Contractor and landowners where work is outside the right-of-way shown on the drawings.

A copy of these records and tests, as well as the records of corrective action taken, shall be furnished the Government.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 EXCAVATION

3.1.1 General

Within the station limits of the work, the Contractor shall excavate and remove all material of whatever nature encountered as may be necessary to produce the theoretical cross sections, bottom grades, and alignments for the channel enlargement as shown on the drawings and/or specified herein. Excavation in the vicinity of bridges which cross the channel shall be performed in such manner so as to only excavate that material necessary for construction of work under this contract, as shown on the drawings and as stated herein. Smooth transitions shall be effected between sections at the

changes in side slopes and bottom widths, and shall transition to existing slopes of existing riprap as indicated on the drawings or as directed by the Contracting Officer. The Contractor shall perform channel excavation between Station 107+55 and Station 140+67. The existing riprap at the bridges shall not be disturbed. The approximate theoretical centerline of the channel improvement is as indicated on the drawings and may be field adjusted by the Contracting Officer to conform to conditions at the time of excavation. A tolerance of one foot, vertically, above the theoretical bottom grade will be allowed, provided that the theoretical cross-sectional area is obtained and the side slopes are not steeper than specified. Changes in the width and/or depth of the channel shall be made gradually. Dressing of side slopes will not be required except as specified in SECTION 02935 - ESTABLISHMENT OF TURF.

Refill of over-excavation will not be required except as necessary to meet the requirements specified hereinabove. Excavation shall commence at the downstream limits of the work and shall be carried continuously upstream and shall transition to the existing slopes of existing riprap. If weather, stream elevations, or other conditions are such that work cannot be effectively prosecuted in the above order and work at other locations can be performed without endangering the work or other property, a change in the order of work may be authorized.

3.1.2 Embedment of Stone Protection

The Contractor shall excavate, in areas where bedding material and riprap are to be placed in such a manner that the bedding material and riprap are placed beneath the theoretical cross section as indicated on the drawings. Tolerances for such excavation shall be subject to the tolerances for bedding material and riprap as specified in paragraphs 3.2 and 3.3.2 of SECTION 02544 STONE PROTECTION. The finished grade of the adjacent channel excavation shall conform to the finished riprap grade at and in the vicinity of the junctions of these surfaces. Stone protection shall be placed as channel excavation progresses upstream as soon as practicable.

3.1.3 Lateral Ditches

When so directed, the Contractor shall excavate lateral ditches along the outer limits of the right-of-way as may be necessary to provide outlets for drainage of isolated low areas where the natural drainage outlet will be blocked by the disposition of excavated material. All lateral ditches shall be excavated with 1V on 2H side slopes and bottom widths of 6 feet, unless otherwise directed by the Contracting Officer. The exact locations and extent of lateral ditches will be determined by the Contracting Officer as the channel work progresses. Insofar as practicable, the Contractor will be notified of the location and extent of lateral ditches that are required prior to the time the clearing adjacent thereto is completed.

3.1.4 Inlet Drains

Stone protection shall be placed at inlet drains as excavation work progresses upstream. Existing drains on the side of the channel in reaches where excavation is required, which are not provided with culverts, shall be enlarged along the existing alignment between the right-of-way limit line and the improved channel of Main Outlet Ditch. Inlet drains that are to receive riprap will be indicated by the Contracting Officer. Bottom grades of such enlargements shall be a line descending from the existing bottom elevation at the right-of-way limit line to the bottom grade of the improved channel of Main Outlet Ditch. Side slopes and bottom widths shall be approximately equal to the existing side slopes and widths; however, side slopes shall not be steeper than 1V on 2H nor shall the bottom widths be less than 10 feet.

3.2 DISPOSAL OF EXCAVATED MATERIAL.

All material resulting from channel excavation shall be disposed of by placing in the excavated material disposal area shown on the drawings. Excavated material shall be disposed of by removal from site as indicated on the drawings and/or specified herein. Excavated material shall be hauled off site to the city park located approximately 1.5 miles away. The Contractor shall use the following hauling route through the city of Helena, Arkansas, turn north on Pecan Street, turn east on Perry Street, go directly to the city park disposal area site. The Contractor shall place the excavated material in the city park low lying area as directed by the Contracting Officer. The Contractor shall be responsible for placing the various materials to be disposed of in such locations within the prescribed disposal area that they will not flow or slide outside the disposal areas. The Contractor shall make any necessary arrangements for hauling on city streets or off site haul routes and agreements shall meet the approval of the Contracting Officer.

3.3 SLIDES AND SHOALS

3.3.1 Channel

In case sliding or shoaling occurs in any part of the channel or inlet drain excavation after excavation as prescribed above has been completed, but prior to the final acceptance of all work under the contract, the Contractor shall remove such portions of the slides or shoals as the Contracting Officer may direct. In case the slide or shoal is due to no fault of the Contractor, an equitable adjustment in the contract price will be made under the CONTRACT CLAUSE entitled "Changes." Material removed from the slides and/or shoals shall be disposed of in disposal area in accordance with 3.2 above. Shoaling from failure of the Contractor to keep the channel clear of obstructions until final acceptance of the entire work will be considered to be the fault of the Contractor. Such shoals shall be removed at the Contractor's expense.

3.4 EXISTING CHANNEL

The Contractor shall construct temporary traps to catch drift and/or conduct his operations in such manner that the existing channel below the limits of the work will not be deteriorated. Shoals, drift racks, temporary crossings or other obstructions within such channel caused through the fault or negligence of the Contractor shall be removed as directed by the Contracting Officer at the expense of the Contractor. In the performance of this work, the necessary right-of-way for ingress, egress and operation of equipment and area for disposal of excavated material and debris resulting from such obstruction removal outside the right-of-way limits indicated on the drawings shall be obtained by the Contractor from the landowners at the expense of the Contractor. Three copies of the agreement between the Contractor and each landowner granting the Contractor permission for the use of lands for such purpose shall be furnished the Contracting Officer before the Contractor's entry thereon.

--End of Section--

DIVISION 2 - SITE WORK

SECTION 02350

STEEL SHEET PILING

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1.4 SUBMITTALS

1.4.1 Equipment Descriptions

The Contractor shall submit complete descriptions of pile driving equipment, including hammers, extractors, protecting caps and other appurtenances to the Contracting Officer for information only prior to commencement of work.

1.4.2 Certificate

The Contractor shall furnish the Contracting Officer a certificate showing that piling furnished has the required interlock strength as determined by test results of two representative test specimens, approximately 3 inches long, per heat. The certificate shall indicate piling type, dimensions and section properties. The certificate shall be submitted for information only.

PART 2 PRODUCTS

2.1 MATERIALS

Steel for sheet piling shall conform to the requirements of ASTM A 328. Sheet piling, including special fabricated sections, shall be of the type indicated on the drawings, have a nominal web thickness of not less than 3/8-inch and be of a design such that when in place they will be continuously interlocked throughout their entire length. Welded connections shall conform to the requirements of AWS D1.1. Piling shall have the properties equivalent to those listed in the following table:

PROPERTIES OF SECTIONS

Type Of Section	Nominal Web Thickness (Inches)	Section Modulus Per Lin. Ft. of Wall (In-Cu)	Weight Per Sq. Ft. of Wall (lbs.)	Weight Per Lin Ft. of Pile	Minimum Interlock Strength in Tension (Lbs Per) Lin In)
PZ 22*	3/8	18.1	22.0	40.3	12,000

*Cold-rolled sections with equivalent properties may be used.

PART 3 EXECUTION

3.1 INSTALLATION

3.1.1 Placing and Driving

3.1.1.1 Placing

Piling shall be placed to the line and elevations as shown on the drawings. Piles shall be placed in a plumb position with each pile interlocked with adjoining piles for its entire length. Interlocks shall be properly engaged with the thumb of each pile gripped by the thumb and finger of the adjacent pile. Suitable temporary wales or guide structures shall be provided to insure that the piles are driven to correct alignment.

3.1.1.2 Driving

All piles shall be driven to at least the depths shown on the drawings and shall extend to the elevation indicated for the top of the piles. A tolerance of +/- 1/2 inch above or below the indicated top elevation will be permitted.

Piles shall be driven by approved methods in such manner as not to subject the piles to serious damage and to insure proper interlocking throughout the length of the piles. All pile driving shall be performed using a vibratory hammer. Pile hammers shall be maintained in proper alignment during driving operations by use of suitable leads or by guides attached to the hammer. A protecting cap shall be employed in driving, when required, to prevent damage to the tops of piles. All piles shall be driven without the aid of a water jet, unless otherwise authorized. Adequate precautions shall be taken to insure that piles are driven plumb. If at any time the forward or leading edge of the piling wall is found to be out of plumb in the plane of the wall, the piles already assembled and partly driven shall be driven to full depth and the Contractor shall provide and drive tapered piles to interlock with the out of plumb leading edge or take other corrective measures to insure the plumbness of succeeding piles. The maximum permissible taper for any tapered pile will be one-eighth of an inch per foot of length. Each run of piling shall be driven to grade progressively from the start and no pile shall be driven to a lower grade than those behind it in the same run except when the piles behind it cannot be driven deeper. If the pile next to the one being driven tends to follow below final grade, it may be pinned to the next adjacent pile. Should boulders or other obstructions render it impracticable to drive a pile to the specified penetration, the Contractor shall make such changes in design alignment of the pile structure as may be deemed necessary by the Contracting Officer to insure the adequacy and stability of the structure. Payment for the additional labor and materials necessitated by such changes will be made at the applicable contract prices. Piles driven out of interlock with adjacent piles or otherwise damaged shall be removed and replaced by new piles at the Contractor's expense. Piles shall not be driven within 100 feet of concrete less than 7 days old.

3.1.2 Cutting and Splicing

Piles extending above grade shall be cut off to required grade. Piles driven below the elevations indicated for the top of piles and piles which because of damaged heads have been cut off to permit further driving, and are then too short to reach the required top elevation, shall be extended to the required top elevation by welding an additional length, when directed, without cost to the government. Should splicing of piles be necessary, the splice shall be made by an approved butt weld making full penetration of the web. Piles adjoining spliced piles shall be full length piles. The Contractor shall trim the tops of piles excessively battered during driving, when directed to do so. Cut-offs shall become the property of the Contractor and shall be removed from the work.

3.1.3 Pulling and Re-Driving

The Contractor may be required to pull certain selected piles after driving, for test and inspection, to determine the conditions of the piles. Any pile so pulled and found to be damaged to such extent as would impair its usefulness in the structure shall be removed from the work and the Contractor shall furnish and drive a new pile to replace the damaged pile. Piles pulled and found to be in a satisfactory condition shall be redriven.

3.2 TREATMENT OF PILE TOPS

Handling holes in piling shall be plugged by welding to the piling a 1/8-inch thick steel plate of sufficient size to cover the hole. The tops of the piles shall be cut off by sawing or burning to conform to the slope or grade indicated on the drawings.

-- End of Section --

DIVISION 2 - SITE WORK

SECTION 02544

STONE PROTECTION

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SECTION 02544

STONE PROTECTION

PART 1 GENERAL

1.1 SCOPE

The work provided for herein consists of furnishing all plant, labor, equipment and materials, and performing all operations in connection with the construction of the stone protection, including foundation preparation, placement of bedding material, placement of riprap, and excavation for placement of stone protection, all in accordance with these specifications and the contract drawings.

1.2 QUALITY CONTROL

The Contractor shall establish and maintain quality control for all stone protection testing and operations to assure compliance with contract requirements, and shall maintain records of the quality control for all construction including but not limited to the following:

- (1) Foundation preparation (line and grade).
- (2) Inspection at the worksite to ensure use of specified materials.
- (3) Bedding gradation and placement.
- (4) Riprap gradation and placement.

A copy of these records of inspections and tests, as well as the records of corrective action taken, shall be furnished the Government.

1.3 APPLICABLE PUBLICATION

The following publication of the issue listed below, but referred to thereafter by basic designation only, forms a part of this specification to the extent indicated by the reference thereto:

U.S. ARMY CORPS OF ENGINEERS, HANDBOOK FOR CONCRETE AND CEMENT (CRD)	
CRD-C 106-93	Unit Weight and Voids in Aggregate
CRD-C 107-94	Specific Gravity and Absorption of Coarse Aggregate

PART 2 PRODUCTS

2.1 BEDDING MATERIALS

2.1.1 General

Bedding material shall consist of crushed stone. 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.

2.1.2 Gradation

<u>U.S. Standard Sieve No.</u>	<u>Permissible Limits Percent by Weight, Passing</u>
3-inch	100
1 1/2-inch	85-100
3/4-inch	35-70
3/8-inch	5-40
No. 4	0-10

The material shall be well-graded between the limits shown. The Contractor shall furnish a certified test report which certifies that the supplied bedding material meets the above gradation and also furnish a representative sample of this same material to the Government.

2.2 STONE

2.2.1 General

All stone shall be durable material as approved by the Contracting Officer. The sources from which the Contractor proposes to obtain the material shall be selected well in advance of the time when the material will be required. In case an undeveloped source is to be used, the Contractor shall show that an ample quantity of material is available. Stone for riprap shall be of a suitable quality to ensure permanence in the structure and in the climate in which it is to be used. It shall be free from cracks, seams and other defects that would tend unduly to increase its deterioration from natural causes. The inclusion of objectionable quantities of dirt, sand, clay and rock fines will not be permitted.

2.2.2 Sources and Evaluation Testing

Riprap shall be obtained in accordance with the provisions of SPECIAL CONTRACT REQUIREMENTS Clause 1.30, Stone Sources. The Contractor shall submit suitable test reports and service records to show the acceptability of the stone. If the Contractor proposes to furnish riprap from a source not currently listed, the Contractor shall make such investigations as necessary to determine whether acceptable stone can be produced from the proposed source. Satisfactory service records on work outside the Corps of Engineers will be acceptable. In order for

riprap to be acceptable on the basis of service records, riprap of a similar size must have been placed in a similar thickness and exposed to weathering under similar conditions as is anticipated for this contract, and have satisfactorily withstood such weathering for a minimum of twenty years. If no such records are available, the Contractor shall make tests to assure the acceptability of the stone. The tests to which the stone may be subjected will include petrographic analysis, specific gravity, abrasion, absorption, wetting and drying, freezing and thawing and such other tests as may be considered necessary by the Contracting Officer. The following guidance is provided for use by the Contractor in analyzing a new source of stone. Stone that weighs less than 150 lbs/c.f. or has more than 2% absorption will not be accepted unless other tests and service records show that the stone is satisfactory. The method of tests for unit weight will be CRD-C 106. The method of tests for absorption will be CRD-C 107. Samples shall be taken by the Contractor under the supervision of the Contracting Officer at least 60 days in advance of the time the placing of the stone is expected to begin. The Contractor has the responsibility to assure the tests are performed in accordance with applicable Corps of Engineers' methods of testing given in the Handbook for Concrete and Cement, and will be performed at a Waterways Experiment Station approved testing laboratory. The cost of testing will be borne by the Contractor.

2.2.3 Gradation

Gradation shall conform to the following table and to Plate VII at the end of this section and format thereof shall be as shown. Neither the width nor the thickness of any piece shall be less than one-third of its length. An allowance of 5 percent by weight for inclusion of quarry spalls will be permitted. Stone shall be reasonably well graded between the largest and smallest pieces. The table below describes the upper and lower limit curves for the riprap gradation. The graph of the riprap with the limit curves plotted thereon is inserted at the end of this section as PLATE VII.

TABLE I
(For Riprap "R 90")

<u>Percent Lighter by Weight (SSD)</u>	<u>Limits of Stone Weight, lb.</u>
100	90-40
50	40-20
15	20-5

2.2.4 Test Method

Gradation test method shall conform to the requirements of "MVD Standard Test Method for Gradation of Riprap" which is inserted at the end of this section as PLATE I; an Example Gradation and Worksheet, an Example Gradation Sheet, and an example Gradation Test Data Sheet all inserted at the end of this section as PLATES II, III, IV, and V.

2.2.5 Gradation Test

The Contractor shall perform a gradation test or tests on the riprap at the quarry. At least one gradation test shall be performed. The sample shall be taken by the Contractor under the supervision of the Contracting Officer, shall consist of not less than 15 tons of riprap and shall be collected in a random manner which will provide a sample which accurately reflects the actual gradation arriving at the jobsite. If collected by the truckload, each truckload shall be representative of the gradation requirements. The Contractor shall provide all necessary screens, scales and other equipment, and the operating personnel therefor, and shall grade the samples, all at no additional cost to the Government.

PART 3 EXECUTION

3.1 BASE PREPARATION

Areas on which the bedding material and riprap are to be placed shall be dressed to conform to cross sections shown on the contract drawings and as specified in SECTION 02220 - EXCAVATION. Humps and depressions within the slope lines shall be dressed to provide relatively smooth and uniform surfaces. Immediately prior to placing the bedding material, the prepared base will be inspected by the Contracting Officer and no material shall be placed thereon until that area has been approved. Bedding material and riprap shall be placed as channel excavation progresses upstream as soon as practicable.

3.2 PLACEMENT OF BEDDING MATERIAL

Bedding material for riprap bedding shall be spread uniformly on the prepared base to the lines and grades as indicated on the contract drawings and in such manner as to avoid damage to the prepared base. Any damage to the surface of the prepared base during placing of the material shall be repaired before proceeding with the work. Compaction of material placed on the prepared base will not be required, but each layer shall be finished to present a reasonably even surface, free from mounds or windrows. The allowable deviation from the prescribed thickness shall be plus 2 inches.

3.3 RIPRAP

3.3.1 General

Riprap shall be placed on the prepared base and/or bedding material within the limits shown on the contract drawings. Riprap shall be as specified in 2.2 above.

3.3.2 Placement

Riprap shall be placed in a manner which will produce a reasonably well-graded mass of rock with the minimum practicable percentage of voids, and shall be

constructed, within the specified tolerance, to the lines and grades indicated on the contract drawings. A tolerance of not less than plus 6 inches from the slope lines and grades shown on the contract drawings will be allowed in the finished surface of the riprap, except that the extreme of this tolerance shall not be continuous over an area greater than 200 square feet. Riprap shall be placed to its full course thickness in one operation and in such manner as to avoid displacing the bedding material. The larger stones shall be well distributed and the entire mass of stones in their final position shall be graded to conform to the gradation specified in 2.2.3. 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. Placing riprap by dumping it into chutes, or by similar methods likely to cause segregation of the various sizes, will not be permitted. Placing riprap by dumping it at the top of the slope and pushing it down the slope 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; or by other methods of placement which will produce the specified results. All dump trucks used for placing stone shall be equipped with bottom-hinged tailgates. The gate's releasing mechanism shall be arranged so that it may be operated only from location at or near the front of the truck. Each truckload shall be representative of the gradation requirements. 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. The Contractor shall maintain the riprap until accepted and any material displaced prior to acceptance and due to the Contractor's negligence shall be replaced at his expense and to the lines and grades indicated on the contract drawings.

-- End of Section --

LMVD STANDARD TEST METHOD FOR GRADATION

December 14, 1998

- A. Select a representative sample (Note #1), weigh and dump on hard stand.
- B. Select four specific size stones to use as reference stones (a1, b1, c1, and d1) while performing the "individual weight larger than" test (see example & Note #2). Selected stone sizes should represent an evenly distributed cross section of the various size stones contained within the sample. Reference stone "a1" is typically the largest stone in the sample. Procedure is similar to the standard aggregate gradation test for "individual weight retained".
- C. Determine the largest size stone in the sample. (100% size)
- D. Separate the sample into piles starting with the stones that are larger than reference stone "b1" and proceeding to the smallest stones. The first pile should contain all stones larger than reference stone "b1" and smaller than "a1", the largest stone. Pile two should contain all stones larger than "c1" and smaller than "b1". Pile 3 should contain all stones larger than "d1" and smaller than "c1". The remaining pile should contain all stones smaller than "d1". Use reference stones for visual comparison in separating the obviously "larger than" stones. Stones that appear close to a specific size reference stone must be individually weighed. If a stone is heavier than the specific size reference stone, it should be placed in the pile containing the stones larger than the reference stone. Weigh each pile as a whole or cumulatively adding each stone in the individual piles.
- E. Paragraph D above will result in "individual weight retained" figures. Calculate individual percent retained (heavier than) and cumulative percent retained and cumulative percent passing (lighter than). Record test results on the "Gradation Test Data Sheet" (plate V) as shown on example plate III. Plot percent finer by weight, along with the specification curves on ENG Form 4055.
- F. See plate V and plate VI for a blank "Gradation Test Data Sheet" and a blank ENG Form 4055. Plates VII, VIII, and IX have been provided for the convenience of the contractor and can be used as necessary. These three plates have the upper and lower specification limits for "R-90", "R-200", and "R-650" pre-plotted on ENG Form 4055.

NOTES

- Sample Selection. The most important part of the test and the least precise is the selection of a representative sample. No "standard" can be devised; larger quarry run stone is best sampled at the shot or muck pile by given direction to the loader; small graded riprap is best sampled by random selection from the transporting vehicles. If possible, all parties should take part in the sample selection and agree before the sample is run that the sample is representative.
- Selection of Size for Separation. It is quite possible and accurate to run a gradation using any convenient sizes for the separation, without reference to the specifications. However, it is usually more convenient to select weights from the gradation limits, such as the 90 lbs., 40 lbs., 20 lbs., and 5 lbs. as shown in the following "R-90" example. After the test is plotted on ENG 4055 and a curve drawn, the gradation limits from the specifications shall be plotted.

(EXAMPLE)

Table From Specifications

TABLE I
(For Riprap "R 90")

<u>Percent Lighter by Weight (SSD)</u>	<u>Limits of Stone Weight, lb.</u>
100	90-40
50	40-20
15	20-5

(EXAMPLE)

GRADATION TEST DATA SHEET

Quarry AAA Quarry Inc. . Stone Tested R-90 .

Date of Test 24 May 79 . Testing Rate _____

TEST REPRESENTS

Contract No.	District	Tons
DACW66-79-C-0005	Memphis	16
	TOTAL	16

GRADATION

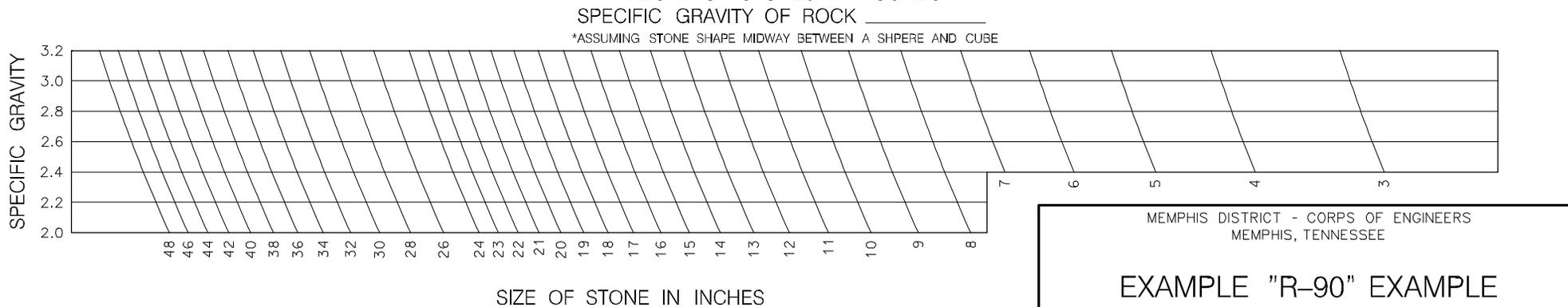
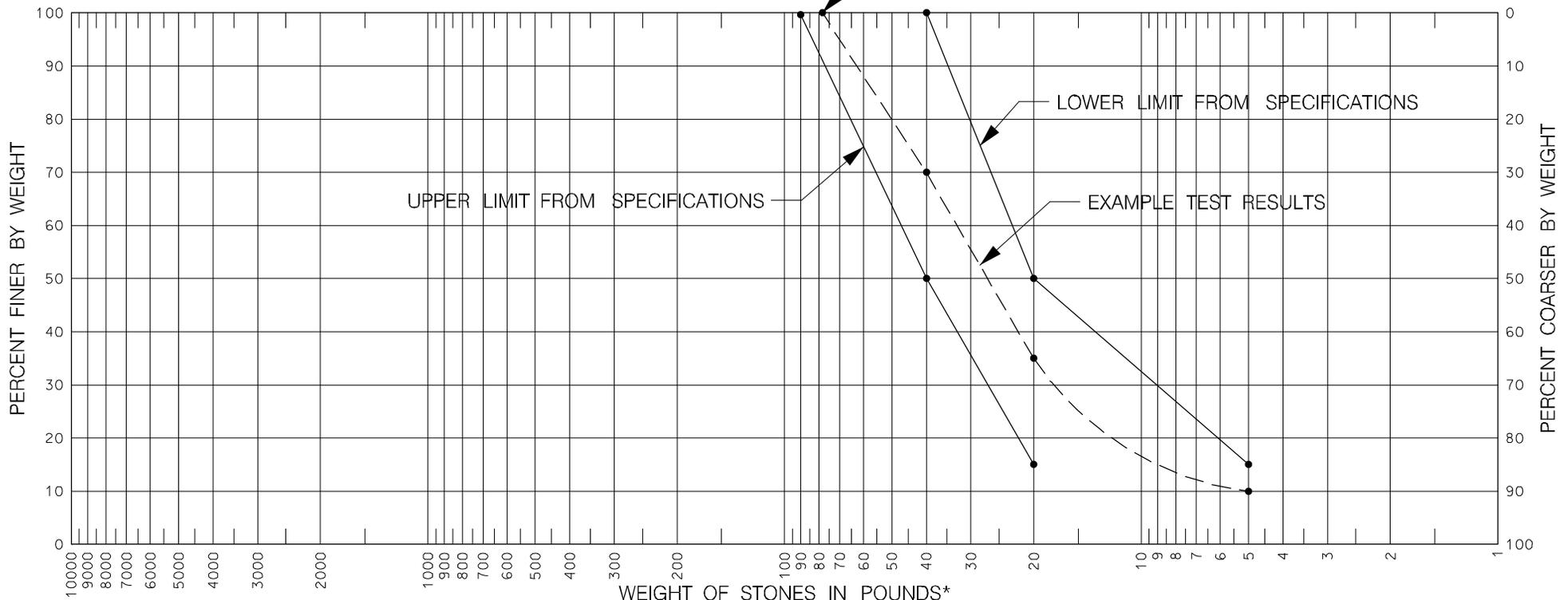
Stone Size (lbs.)	Individual Weight Retained	Individual % Retained	Cumulative %Coarser	%Finer	Specification % Finer by wt
90 "a1"	0	0	0	100	100
40 "b1"	9600	30	30	70	100-50
20 "c1"	11200	35	65	35	50-15
5 "d1"	8000	25	90	10	<15
< 5 "d1"	3200	10	100	-	
Total Weight	32000lbs				

Remarks: LARGEST STONE SIZE = 78 LBS .

I Certify that the above stone sample is representative of the total tonnage covered by this test report.

Contractor Representative: Representative's Name and Signature .

Government Representative: Representative's Name and Signature .



MEMPHIS DISTRICT - CORPS OF ENGINEERS
MEMPHIS, TENNESSEE

EXAMPLE "R-90" EXAMPLE

DACW66-79-C-0005
PROJECT: NEW FRANKLIN DITCH DATE: 24 MAY 79

RIPRAP GRADATION CURVES

G R A D A T I O N T E S T D A T A S H E E T

Quarry _____ Stone Tested _____

Date of Test _____ Testing Rate _____

T E S T R E P R E S E N T S

Contract No.	District	Tons
TOTAL		

G R A D A T I O N

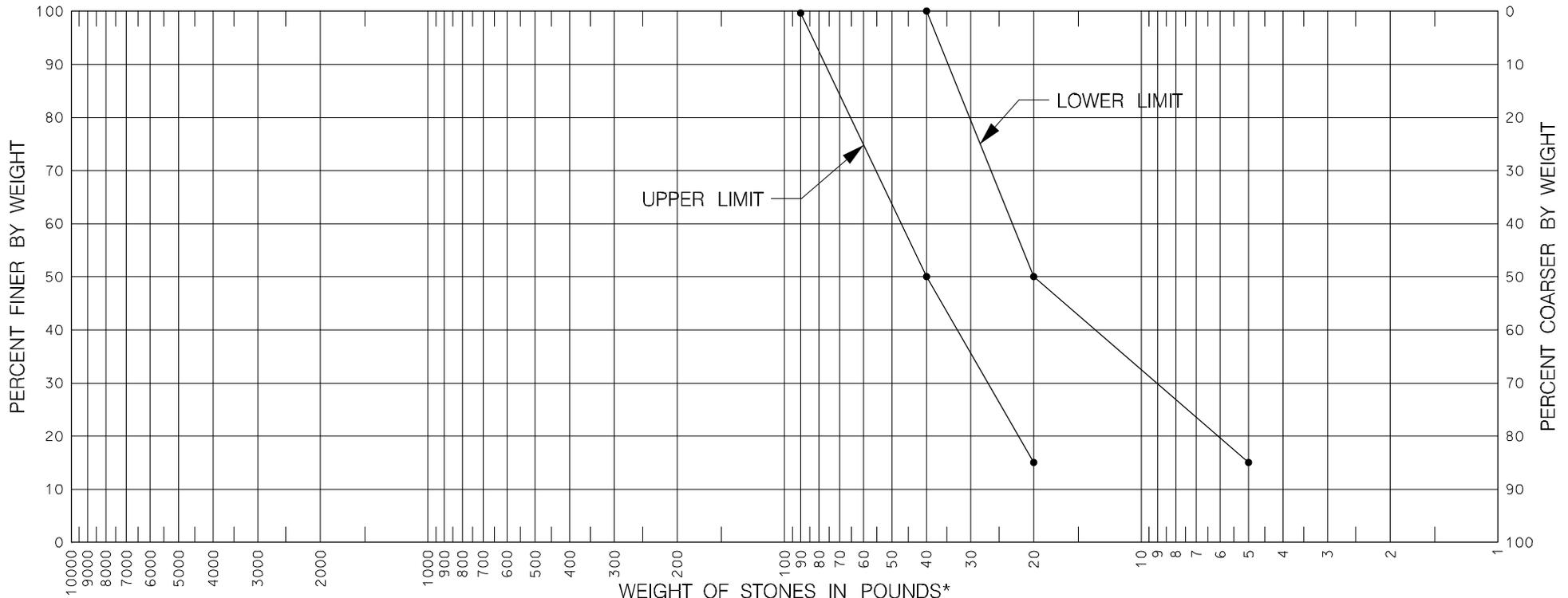
Stone Size (lbs)	Individual Weight Retained	Individual % Retained	Cumulative %Coarser	%Finer	Specification % Finer by wt
Total Weight					

Remarks: _____

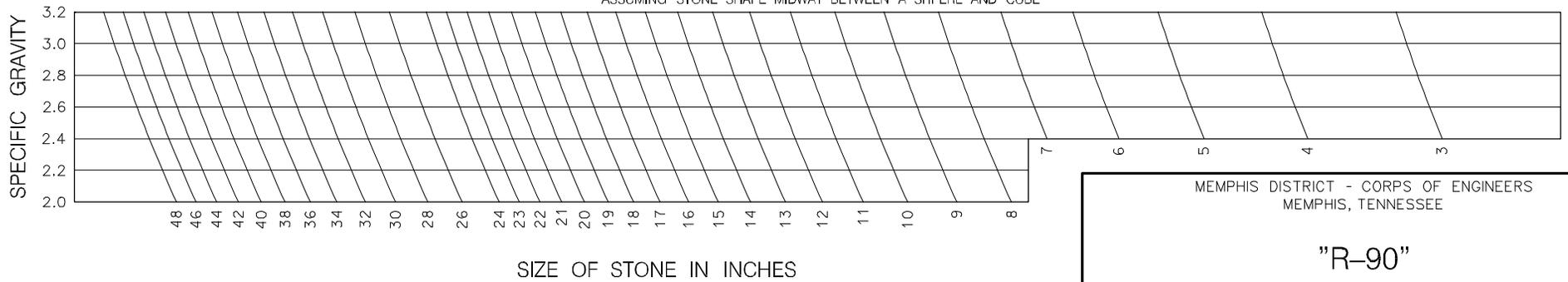
I Certify that the above stone sample is representative of the total tonnage covered by this test report.

Contractor Representative _____

Government Representative _____



WEIGHT OF STONES IN POUNDS*
 SPECIFIC GRAVITY OF ROCK _____
 *ASSUMING STONE SHAPE MIDWAY BETWEEN A SPHERE AND CUBE



MEMPHIS DISTRICT - CORPS OF ENGINEERS
 MEMPHIS, TENNESSEE

"R-90"

PROJECT: _____ DATE: _____

RIPRAP GRADATION CURVES

DIVISION 2 - SITE WORK

SECTION 02546

AGGREGATE SURFACING

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SECTION 02546

AGGREGATE SURFACING

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all plant, labor, and materials, and performing all operations necessary for constructing aggregate surfacing upon the crown of the existing gravel road all as indicated on the drawings, as directed by the Contracting Officer, and/or as specified herein.

1.2 QUALITY CONTROL

The Contractor shall establish and maintain quality control for the work specified in this section to assure compliance with contract requirements, and maintain records of his quality control for all construction operations including but not limited to the following:

(1) Subgrade

Location, preparation.

(2) Materials

Material delivered to the site conforms to specifications and is comparable to samples of material previously tested and approved for use. Tests include gradation, liquid limit and plasticity index of material passing the No. 40 sieve.

(3) Placement

Width, thickness, distribution, compaction, final grading, and maintenance.

A copy of these records and tests, as well as the records of corrective action taken, shall be furnished the Government.

1.3 APPLICABLE PUBLICATION

The following publication of the issues listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the references thereto:

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) PUBLICATIONS.

D 698-91

Laboratory Compaction Characteristics of Soil Using
Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³))

D 1556-90
(R 1996)

Density and Unit Weight of Soil in Place by
the Sand-Cone Method

D 2216-92	Water (Moisture) Content of Soil and Rock and Ed Comt 1
D 2922-91	Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
D 3017-96 (R 1993)	Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth)
D 4318-95a	Liquid Limit, Plastic Limit, and Plasticity Index of Soils

PART 2 PRODUCTS

2.1 AGGREGATE

Aggregate for surfacing shall be composed of sand-clay-gravel mixtures; gravel or stone screenings; crusher run coarse aggregate consisting of gravel or crushed stone with sand and binding material; or any combination of such materials which conforms to specified requirements. All material shall be free from organic matter and lumps or balls of clay. The material shall conform to the requirements as specified in 2.1.1 and 2.1.2 below, and shall conform to the gradation specified in 2.1.3 below. All aggregate surfacing furnished under this contract shall comply favorably with representative samples as to quality, gradation, and moisture content.

2.1.1 Coarse Aggregate

Coarse aggregate is defined as aggregate retained on the No. 10 (2.00 mm) sieve. Coarse aggregate shall consist of hard, durable particles or fragments of stone or gravel. Materials that are soft, pliable, or subject to rapid deterioration when exposed to weathering shall not be used.

2.1.2 Fine Aggregate

Fine aggregate is defined as aggregate passing the No. 10 (2.00 mm) sieve. Fine aggregate shall consist of natural or crushed sand, and also shall include fine mineral particles passing the No. 200 (0.075 mm) sieve. The fraction of the material passing the No. 200 (0.075 mm) sieve shall be no more than two-thirds that of the fraction passing the No. 40 (0.425 mm) sieve. That portion of the aggregate passing the No. 40 (0.425 mm) sieve shall have a liquid limit of not more than 35 and a plasticity index of not less than 6, nor more than 15, as determined by ASTM D 4318. However, if crushed stone is utilized then the plasticity index shall be between 0 and 15.

2.1.3 Gradation

Aggregate surfacing material shall conform to the following gradation:

<u>U.S. Standard Sieve</u>	<u>Permissible Limits Percent by Weight, Passing</u>
3"	100

1-1/2"	95-100
3/4"	65-100
3/8"	40- 80
No. 4	30- 60
No. 10	20- 50
No. 40	15- 35
No. 200	5- 15

2.2 SAMPLING AND TESTING

2.2.1 General

Representative samples for testing of the material shall be taken by the Contractor under the supervision of the Contracting Officer. All costs of sampling and testing, except as specified in 3.2 below, shall be borne by the Contractor and no separate payment will be made therefor.

2.2.2 Contractor Testing

Prior to delivery of any material to the job site, the material shall be tested for compliance with the specifications by an approved independent testing laboratory. In the event a noticeable change in the materials is observed during placement, such testing shall be performed at the direction of the Contracting Officer regardless of the quantity of material delivered. Certified results of the tests shall be submitted to the Contracting Officer for approval.

PART 3 EXECUTION

3.1 SUBGRADE

The subgrade shall be symmetrical about the centerline of the existing gravel road upon which aggregate surfacing is to be placed. Subgrade for all surfacing shall be graded and smoothed prior to placing the surfacing. Subgrade for the surfacing shall be in a satisfactory condition for receiving aggregate surfacing for a distance of at least 200 feet in advance of the placing of aggregate surfacing material, as applicable. Aggregate shall not be placed on frozen ground.

3.2 PLACEMENT

(1) Aggregate shall be dumped and spread upon the subgrade of the above mentioned roadway surfaces in the amount required to produce a pavement with width, compacted thickness and cross section as indicated on the drawings. The placement shall be commenced at the nearest point of delivery of the surfacing material to a reach of roadway and shall be carried continuously away from such point unless otherwise authorized by the Contracting Officer. Reaches of surfacing which are no longer needed for haul roads for supplying the aggregate shall be graded and dressed to provide a slope each way from the centerline and then compacted by at least four passes of a pneumatic tired roller having tire pressures of 35 to 40 pounds per square inch and a gross weight of not less than 20,000 pounds or by other approved compacting equipment which will attain comparable compaction. A pass of the roller shall consist of the complete

coverage of the surface by the roller. The compaction passes of the roller shall not be performed when the material is so wet that it is displaced under the roller or when the material is too dry that moisture is required for compaction as approved by the Contracting Officer. In the event aggregate is hauled over rolled portions of the surfacing such portions shall subsequently be graded, dressed and rolled again as specified hereinabove at no additional cost to the Government.

(2) By the end of each workday, all aggregate surfacing hauled and placed on the roadway shall be spread and blended into the existing roadway surface as specified in subparagraph (1) above. At no time under this contract shall aggregate surfacing be dumped and left at the end of the workday without being placed as specified above.

3.3 MAINTENANCE

The Contractor shall maintain the aggregate surfacing in a good and satisfactory condition until acceptance. The Contractor shall correct any deficiencies in width and thickness and shall remove, haul back to the pit, and replace, without additional compensation, any deficient material placed in the work.

--End of Section--

DIVISION 2 - SITE WORK

SECTION 02700

CULVERT REMOVAL AND INSTALLATION

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SECTION 02700

CULVERT REMOVAL AND INSTALLATION

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all labor, equipment, and materials, and performing all operations necessary for the removal and disposal of existing culverts and for the installation of new corrugated metal pipe culverts, all as indicated on the drawings, and/or specified herein.

1.2 QUALITY CONTROL

The Contractor shall establish and maintain quality control for the work specified in this section to assure compliance with contract requirements and maintain records of his quality control for all construction operations including but not limited to the following:

(1) Materials. Review, prior to submittal, of certificates for compliance with specification requirements.

(2) Installation. Length, type, location, alignment, grade, slope, foundation bedding, coupling bands, repair of damaged areas.

(3) Backfill. Thickness of layers, maintenance of culvert alignment, compaction, elevation.

A copy of these records and tests, as well as the records of corrective action taken, shall be furnished the Government.

1.3 APPLICABLE PUBLICATIONS

The following publications of the issues listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the reference thereto:

American Society for Testing and Materials (ASTM) Publications.

A 760/A760M-95b	Corrugated Steel Pipe, Metallic-Coated for Sewers and Drains
A 849-95	Post-Applied Coatings, Pavings, and Linings for Corrugated Steel Sewer and Drainage Pipe
D 698-91	Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft ³ (600kN-m/m ³))
D 1556-90 (R 1996)	Density and Unit Weight of Soil in Place by the Sand-Cone Method
D 2922-96	Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Pipe

The zinc coated (Galvanized) corrugated metal pipe culvert shall conform to the requirements of ASTM A 760, for Type I and ASTM A 849, for fully coated using Class A material. As an alternate, aluminum coated (Aluminized) corrugated metal pipe culverts may be used conforming to ASTM A 760, Type I with no bituminous coating required. The manufacturer's certified statement as to quality will be accepted in lieu of performing the prescribed tests. Certificates required for demonstrating proof of compliance shall be in compliance with SPECIAL CONTRACT REQUIREMENTS CLAUSE 1.14. The pipe shall be fabricated from 0.079 inches thick sheets. Coupling bands for joints may be 0.064 inches thick or heavier and shall be installed as recommended by the materials manufacturer except as specified herein. Coupling bands shall be coated as specified hereinabove for the pipe and shall have corrugations, not projections, that mesh with the pipe corrugations, and if helical corrugations are used, each length of helical pipe used shall have a minimum 12-inch length of annular corrugations at each end. All installation hardware shall be as recommended by the materials manufacturer. Inlet and outlet sections shall be unjointed sections at least 20 feet in length.

PART 3 EXECUTION

3.1 REMOVAL OF EXISTING CULVERTS

All culverts removed from their present positions shall be disposed of as specified in 3.2.3 of SECTION 02110. The Contractor shall perform such excavation as is necessary for removal of the culverts and installation of new culverts as indicated on the drawings. Earth materials resulting from the excavation shall be stockpiled and subsequently used in the culvert backfill or shall be disposed of as specified in 3.2 of SECTION 02220.

3.2 INSTALLATION

3.2.1 Culvert Pipe

The culvert pipe length as shown on the drawings is approximate only. The exact length of the culvert will be determined in the field by the Contracting Officer and the Contractor will be notified of such length prior to installation. The pipe shall be placed at the location indicated on the drawings. Installation of the pipe shall be accomplished in the dry. The pipe shall be bedded on a smooth surface with invert elevation as determined in the field. Joints shall be carefully made by the material manufacturer's standard method, subject to the provisions of 2.1.1 above. Pipe shall be handled with care so that damage to the coating will be minimized. Coupling band rods if applicable and damaged areas of pipe shall be coated with an approved asphaltic cement prior to placement of backfill, and in case damaged areas are at joints, such areas shall be coated prior to making the joint. The Contractor shall perform such excavation as is necessary for removal of the existing culverts and installation of the replacement culverts, all as indicated on the drawings. Excavated materials shall be utilized in the backfill or shall be disposed of as specified in paragraph 3.2 of SECTION 02220.

3.3 BACKFILL

3.3.1 General

Backfill shall be placed around and over the culvert pipes to the line and grade indicated on the drawings and/or as directed by the Contracting Officer. Backfill material shall be obtained from the required excavations, and shall be free from roots, muck, brush and other objectionable matter. Material used within 2 feet of the pipes shall consist of cohesive material. The Contractor will be required, when directed, to remove any materials which the Contracting Officer considers to be objectionable in the backfill. Frozen material shall not be placed in the backfill nor shall material be placed upon frozen foundations. The suitability of each section of the foundation for placing materials thereon will be determined by the Contracting Officer.

3.3.2 Compacted Backfill

Backfill material within 2 feet of the pipe shall be placed concurrently on each side of the pipe in layers not more than 6 inches in thickness prior to compaction. In placing and compacting the material, care shall be taken to insure that the backfill is rammed tight against the pipe at all points. Compaction within 2 feet of culvert pipe shall be accomplished by the use of approved mechanical hand tampers. Each layer of backfill placed within 2 feet of the culverts shall be compacted to a density of at least 95 percent of the laboratory density obtained by the standard density test (ASTM D 698), Method D. The field density determination shall be by the Sand-Cone Method (ASTM D 1556) or by the Nuclear Method (ASTM D 2922). The moisture content after compaction shall be within the limits of 2 percentage points above optimum and 3 percentage points below optimum moisture content as determined in accordance with ASTM D 698. The materials may require moistening or aerifying as necessary to provide the above specified moisture content. The Contractor shall perform standard compaction tests to determine optimum water content and maximum densities and will perform field density and water content tests as assurance checks; the Contractor shall perform field density and water content tests on each layer of material placed to assure that proper compaction is being achieved.

3.3.3 Semicompacted Backfill

The remaining culvert backfill shall be placed in layers not exceeding 12 inches in thickness prior to compaction and shall be semicompacted. Each layer shall be compacted by at least 3 passes of a crawler type tractor weighing not less than 20,000 pounds and exerting a unit tread pressure of not less than 6 pounds per square inch and operated at speeds not to exceed 3.5 miles per hour or by other approved compacting equipment which will attain comparable compaction. When in the opinion of the Contracting Officer, the surface of any layer is too smooth to bond properly with the succeeding layer, it shall be adequately scarified before the succeeding layer is placed. The layers shall be uniformly spread, distributed, and otherwise manipulated during placement to such an extent that individual loads of material deposited on the fill will not remain intact, and large, open voids in the fill will be eliminated.

--End of Section--

DIVISION 2 - SITE WORK

SECTION 02800

GUARD RAIL

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SECTION 02800

GUARD RAIL

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all plant, labor materials, and equipment, and installing all structural steel items for the guardrail as specified herein and/or indicated on the drawings.

1.2 QUALITY CONTROL

The Contractor shall establish and maintain quality control for the work specified in this section to assure compliance with contract requirements and maintain records of his quality control for all construction operations including but not limited to the following:

(1) Materials

Conform to the specifications.

(2) Installation

Conforms to the specifications.

A copy of these records and tests, as well as the records of corrective action taken, shall be furnished the Government.

1.3 APPLICABLE PUBLICATIONS

The following publications of the issues listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the references thereto:

(1) AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) PUBLICATIONS.

A 36/A36M-96	Carbon Structural Steel
A 123/-89a	Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
A 153/A 153M-95	Zinc Coating (Hot-Dip) on Iron and Steel Hardware
A 307-94	Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength

(2) AMERICAN ASSOCIATION OF STATE HIGHWAY BRIDGES AND TRANSPORTATION OFFICIALS (AASHTO).

(3) STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, FIFTEENTH EDITION, 1992

M 180-89 Corrugated Sheet Steel Beams for Highway Guardrail

(4) ARKANSAS STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (1993 EDITION).

1.4 STORAGE OF MATERIALS

Materials shall be stored at the channel site above the ground upon platforms, skids, or other supports. It shall be kept free from dirt, grease, and other foreign matter, and shall be protected as far as practicable from corrosion.

PART 2 PRODUCTS

2.1 GUARD RAIL

2.1.1 Structural Steel

All structural steel shall conform to the requirements of ASTM A 36/A36 M.

2.1.2 Bolts, Nuts, and Washers

All bolts, nuts, and washers exclusive of U-bolts shall conform to the requirements of ASTM A 307, Type 1 and shall be galvanized in accordance with ASTM A 153. All "U"-bolts shall conform to ASTM A 36.

2.1.3 Guard Rails and Posts

The posts, plates, channels, W rails, splice plates, and terminal sections of the guardrails shall be galvanized steel and structural shapes as indicated on the drawings. Steel for the post, plate, splice plate, and channel members shall meet the requirements of ASTM A 36 and shall be galvanized in accordance with ASTM A 123. The galvanized W rail sections including bolts shall conform to the requirements of AASHTO M 180, Class A, Type 1. The reflective washers for guardrail shall be furnished by the Contractor. The Contractor shall submit a sample reflective washer that he intends to use, to the Contracting Officer for approval.

2.1.4 Certificates

Certificates of compliance will be required for all materials.

PART 3 EXECUTION

3.1 INSTALLATION

The guardrail shall be installed as indicated on the drawings and/or as specified herein and in Section 617 of the Arkansas Standard Specifications for Highway Construction.

-- End of Section --

DIVISION 2 - SITE WORK

SECTION 02831

FENCE, CHAIN-LINK

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SECTION 02831

FENCE, CHAIN-LINK

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all plant, equipment, labor and materials, and performing all operations in connection with installation of fence, chain-link in accordance with these specifications and applicable drawings.

1.2 QUALITY CONTROL

The Contractor shall establish and maintain quality control for the work specified in this section to assure compliance with contract requirements and maintain records of his quality control for all construction operations including but not limited to the following:

(1) Materials

Conform to specification requirements.

(2) Installation

Conforms to specification requirements.

A copy of these records and tests, as well as the records of corrective action taken, shall be furnished the Government.

1.3 APPLICABLE PUBLICATIONS

The following publications of the issues listed below, but referred to elsewhere in this section by basic designation only, form a part of this specification to the extent indicated by the references thereto:

(1) AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

C 94-96 Ready-Mixed Concrete

(2) FEDERAL SPECIFICATIONS (Fed. Spec.)

RR-F-191/GEN K Fencing, Wire and Post Metal (and Gates, Chain-Link Fence Fabric, and Accessories)

RR-F-191/1 D	Fencing, Wire and Post, Metal (Chain-Link Fence Fabric)
RR-F-191/2 D	Fencing, Wire and Post, Metal (Chain-Link Fence Gates)
RR-F-191/3 D	Fencing, Wire and Post, Metal (Chain-Link Fence Posts, Top Rails and Braces)
RR-F-191/4 D	Fencing, Wire and Post, Metal (Chain-Link Fence Accessories)
FF-P-101 F	Padlocks

1.4 SUBMITTALS

The following shall be submitted in accordance with Special Contract Requirements 1.32, SUBMITTALS

1.4.1 Detail Drawings

Drawings shall show post sizes and sections; gate frame details, post setting and bracing, barbed wire support arms; details of attachment of fabric and barbed wire to support members; and any other details required to erect the fence along the lines indicated on the drawings.

PART 2 PRODUCTS

2.1 CHAIN-LINK FENCE

2.1.1 General

Refer to FS RR-F-191/G and detailed specifications forming the various parts thereto.

2.1.1.1 Fabric

Fabric shall be FS RR-F-191/1, Type I, zinc-coated steel wire with a minimum coating weight of 1.2 ounces of zinc per square foot of coated surface. Fabric shall be fabricated of 9-gage wire woven in 2-inch mesh. Fabric height shall be same height as existing fence.

2.1.1.2 Gates

The gate shall be a 7 foot swing gate as indicated on the drawings and shall be as recommended by the manufacturer. The Contractor shall submit shop drawings. Gate frame shall be constructed of Class 1 Grade A or B, steel pipe, size SP2 as specified in FS RR-F-191/2. Each end member of the gate frame shall be extended sufficiently above the top member to carry three strands of barbed wire in horizontal alignment with barbed wire strands on the fence. Gate leaves more than 8 feet wide shall have either intermediate members and diagonal truss rods or shall have tubular members as necessary to provide rigid construction, free from sag or twist. Gate fabric shall be attached by method standard with the manufacturer. Hardware items shall be

furnished as required for the operation of the gate. Latches shall be arranged so that padlock will be accessible from both sides of the gate.

2.1.1.3 Posts

Post shall be FS RR-F-191/3, zinc-coated; Class 1, steel pipe. Line posts shall be of the same class throughout the fence. Terminal posts selected shall be of the same class throughout the fence. Gate post shall be round.

2.1.1.4 Braces, Top Rails, and Bottom Rails

Braces and rails shall conform to FS RR-F-191/3, zinc-coated; Class 1, steel pipe. Posts and rails shall be sized as follows:

Top rail and gate brace	1.66-inch pounds/ft	outside	dia.,	2.27
Line posts and gate frame	1.9-inch pounds/ft	outside	dia.,	2.72
Terminal posts	2.375-inch pounds/ft	outside	dia.,	3.6
Gate posts	2.875-inch pounds/ft.	outside	dia.,	5.79

2.1.2 Accessories

Ferrous accessories shall be zinc-coated and conform to FS RR-F-191/4. Truss rods shall be furnished for each terminal post. Truss rods shall be provided with turnbuckles or other equivalent provisions for adjustment. Barbed wire shall be zinc- or aluminum-coated steel wire. Barbed wire support arms shall be the single-arm type, 1 foot in height, and of the design required for the post furnished.

2.1.3 Concrete

Concrete shall conform to ASTM C 94, using 3/4-inch maximum-size aggregate, and having a minimum compressive strength of 2000 psi at 28 days.

2.1.4 Padlocks

Padlocks shall conform to FS FF-P-101 F, Type EPB, Size 1-3/4 inch. Padlocks shall be keyed alike and the lock shall be furnished with two keys. Brochures describing the padlock shall be submitted to the Contracting Officer.

PART 3 EXECUTION

3.1 GENERAL

Fence shall be installed to the lines and grades as directed by the Contracting Officer. The chain-link fence shall be (7) seven feet high and installed along the right and left top banks of the channel improvement as indicated on the drawing and as directed by the Contracting Officer. The area on either side of the fence line shall be cleared as necessary to permit

installation. Line post 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.

3.2 POSTS

Posts shall be set plumb and in alignment. Posts shall be set in concrete to the depth of 36 inches. Posts set in concrete shall be set in holes not less than 16 inches in diameter for terminal post and 10 inches in diameter for line posts. Concrete shall be thoroughly consolidated around each post so as to be free of voids and finished to form a dome. Concrete shall be allowed to cure for 72 hours prior to attachment of any item to the posts.

3.3 TOP RAIL

The top rail shall be supported at each post in a manner that a continuous brace between terminal posts is formed. Where required, sections of top rail shall be joined using sleeves or couplings that will allow expansion or contraction of the rail.

3.4 BOTTOM RAIL

The bottom rail shall be installed in a similar manner as was described in paragraph 3.3.

3.5 TENSION WIRES

Tension wires shall be installed along the bottom of the fence line and attached to the terminal posts of each stretch of the fence. Bottom tension wire shall be installed within the bottom 6 inches of the installed fabric. Tension wire shall be pulled taut and shall be free of sag.

3.6 CHAIN-LINK FABRIC

Chain-link fabric shall be installed on the land side of the post or as directed by the Contracting Officer. Fabric shall be attached to terminal posts with stretcher bars and tension bands. Bands shall be spaced at approximately 15-inch intervals. Fabric shall be pulled taut to provide a smooth uniform appearance free from sag. Fabric shall be fastened to line posts at approximately 15-inch intervals and fastened to top and bottom rails and tension wires at approximately 24-inch intervals. Fabric shall be cut by untwisting and removing pickets. Splicing shall be accomplished by weaving a single picket into the ends of the rolls to be joined.

3.7 BARBED WIRE SUPPORTING ARMS AND BARBED WIRE

Barbed wire supporting arms and 3 strands of 4-point barbed wire shall be installed as indicated and as recommended by the fence manufacturer. Supporting arms shall be anchored to the posts in such a manner to prevent easy removal with hand tools. Barbed wire shall be pulled taut and attached to the arms with clips or other means that will prevent easy removal.

3.8 GATES

Three swing gates shall be installed at the locations shown on drawings. Latches, stops, and keepers shall be installed as required. The gate shall be installed as recommended by the manufacturer. A padlock and 3 feet of 3/16 inch galvanized steel chain (commercially available) shall be furnished for the gate. The padlock shall be keyed such that the keys will work the padlocks furnished. Two keys shall be furnished.

--End of Section--

DIVISION 2 - SITE WORK

SECTION 02935

ESTABLISHMENT OF TURF

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SECTION 02935

ESTABLISHMENT OF TURF

PART 1 GENERAL

1.1 SCOPE

The work provided for herein consists of furnishing all plant, labor, equipment, and materials, and performing all operations necessary for dressing, fertilizing, and turfing areas as specified herein and as indicated on the drawings. Fertilizing and/or seeding may be accomplished by aircraft or ground equipment at the option of the Contractor.

1.2 QUALITY CONTROL

The Contractor shall establish and maintain quality control for the work specified in this section to assure compliance with contract requirements and maintain records of his quality control for all construction operations including but not limited to the following:

(1) Preparation of Ground Surface. Location and quality of dressing, including necessary clearing, filling, or dressing out of washes, smoothness and uniformity of surfaces, and time of year.

(2) Fertilizing. Quality of materials, areas fertilized, quantity applied, and method of application.

(3) Seeding. Quality and type of seed, area covered, rate of application, quantity of seed used, and method of distribution.

(4) Mulching. Quality of materials, area mulched, quantity applied, method of application.

A copy of these records and tests, as well as the records of corrective action taken, shall be furnished the Government.

1.3 AREAS TO BE TREATED

The combination of finish dressing, fertilizing, seeding, and mulching shall be performed upon the surfaces of all excavated material placed in the city park under this contract, the excavated channel slopes to the water's edge; and the top banks of the improved channel, and all other disturbed areas denuded of grass by construction operations.

1.4 CERTIFICATES AND SAMPLES

1.4.1 Fertilizer

Duplicate signed copies of invoices from suppliers shall be furnished. Invoices shall show quantities and percentage of nitrogen, phosphorous, and potash. Upon completion of the project, a final check of the total quantity of fertilizer used will be made against total area treated, and if minimum rates of application have not been met, an additional quantity of material sufficient to make up the minimum application rate shall be distributed as directed.

1.4.2 Seed

The Contracting Officer shall be furnished duplicate signed copies of statements certifying that each container of seed delivered is labeled in accordance with the Federal Seed Act and is at least equal to the requirements specified in 2.1.2 below. This certification shall be obtained from the supplier and shall be furnished on or with all copies of seed invoices.

1.4.3 Mulch

Representative samples of the mulch materials proposed for use shall be submitted for approval.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Fertilizer

Fertilizer shall consist of a mixture containing nitrogen, phosphorous, and potash, and shall be uniform in composition and free-flowing. The fertilizer may be delivered to the site in bags or other convenient containers or delivered in bulk. If delivered in bags or containers, the fertilizer shall be fully labeled in accordance with the applicable fertilizer laws of the State of Arkansas, and shall bear the name, tradename or trademark, and warranty of the producer. The fertilizer shall meet the requirements of the State of Arkansas for commercial fertilizer. Should the commercial fertilizer be furnished in bulk, the Contractor shall furnish certified weight tickets and a certified quantitative analysis report, in triplicate, from a recognized testing laboratory certifying the nutrient ratio of the materials. In the event the commercial mixture is delivered to the job site in the original containers, unopened, the analysis report will not be required.

2.1.2 Seed

Seed labeled in accordance with U.S. Department of Agriculture Rules and Regulations under the Federal Seed Act shall be furnished by the Contractor. Seed shall be furnished in sealed, standard containers unless written exception is granted. Seed that is wet or moldy or that has been otherwise damaged in transit or storage will not be acceptable. The specifications for seeds shall conform to the following, unless otherwise approved by the Contracting Officer:

<u>Germination</u>	<u>Minimum Purity</u>	<u>Minimum</u>
<u>Kind of Seed</u>	<u>Percent</u>	<u>Percent</u>
Big Blue Stem	95	80
Tall Fescue (Alta or Kentucky 31) (Endophyte Fungus Free)	95	80
Serecia Lespedeza	95	80
Switch Grass	95	80
Bermuda	95	80

2.1.3 Soil for Repairs

For fill of areas to be repaired, soil shall be of a quality at least equal to that which exists in areas adjacent to the area to be repaired. Soil used shall be free from roots, stones, and other materials that hinder grading,

planting, and maintenance operations and shall be free from objectionable weed seeds and toxic substances.

2.1.4 Mulch

2.1.4.1 General

Threshed straw from a cereal grain such as oats, wheat, barley, rye, or rice; or wood fiber shall be furnished and applied by the Contractor. Materials that contain noxious grass or weed seeds that might be detrimental to the turfing being established or to adjacent farmland will not be acceptable.

2.1.4.2 Wood Cellulose Fiber Mulch

Wood cellulose fiber mulch for use with hydraulic application equipment shall consist of wood cellulose fiber, processed to contain no growth or germination inhibiting factors, and dyed an appropriate color to facilitate visual metering of application of the materials. The wood cellulose fiber shall contain not in excess of 10 percent moisture, air dry weight basis. The wood cellulose fiber shall be manufactured so that after addition and agitation in slurry tanks, with water, and any other additives, the fibers in the material will become uniformly suspended to form a homogeneous slurry; and that when hydraulically sprayed on the ground, the material will form a blotter-like ground cover which, after application, will allow the absorption of moisture and allow rainfall or mechanical watering to percolate to the underlying soil.

The Contractor shall be prepared to submit, on request, certification from the supplier that laboratory and field testing of the product has been accomplished, and that the product meets the foregoing requirements.

PART 3 EXECUTION

3.1 COMMENCEMENT, PROSECUTION, AND COMPLETION

3.1.1 General

Preparation of the ground surface, fertilizing, and turfing operations shall be accomplished during the season between 1 March and 30 June, inclusive, and 1 September and 15 November, inclusive, unless otherwise authorized by the Contracting Officer. All surfaces completed after a season shall be treated during the next season, without regard to whether either the other features of the contract have been completed prior to that date or the contract time has elapsed. As an option to mulch the Contractor may plant rye seed if approved and as directed by the Contracting Officer. Any exposed surfaces which have not been turfed by the end of a season shall receive temporary mulch protection until permanent turfing can be accomplished. Should construction be halted at any time for any reason, temporarily or permanently, for more than 14 days, in any portion of the site, turfing measures or temporary mulching shall be accomplished immediately on the excavated material disposal area, and any other areas which have been denuded of grass by construction operations.

3.1.2 Sequence of Work

The sequence of operations for work prescribed in this section shall be as follows:

- (1) Preparation of ground surface.
- (2) Fertilizing.
- (3) Seeding.
- (4) Compacting, where applicable.

(5) Mulching, where applicable.

3.2 SPECIAL EQUIPMENT

Hydraulic equipment used for the application of slurry of prepared wood cellulose fiber mulch shall have a built-in agitation system with an operating capacity sufficient to agitate, suspend, and homogeneously mix a slurry. The slurry distribution lines shall be large enough to prevent stoppage. The discharge line shall be equipped with hydraulic spray nozzles that will provide even distribution of the slurry on the various slopes to be mulched. The slurry tank shall have a minimum capacity of 1,000 gallons and shall be mounted on a traveling unit, which may be either self-propelled or drawn by a separate unit, that will place the slurry tank and spray nozzles near the areas to be mulched so as to provide uniform distribution without waste. The Contracting Officer may authorize equipment with a smaller tank capacity provided that the equipment has the necessary agitation system and sufficient pump capacity to spray the slurry in a uniform coat over the surface of the area to be mulched.

3.3 PREPARATION OF GROUND SURFACE

3.3.1 General

Equipment, in good condition, shall be provided for the proper preparation of the ground and for handling and placing all materials. Equipment shall be approved by the Contracting Officer before work is started.

3.3.2 Clearing

Prior to grading and finish dressing, vegetation that may interfere with turfing operations shall be removed and shall be disposed of as specified in SECTION 02110, Paragraph 3.2. The surface shall be cleared of roots, cable, wire, and other materials that might hinder the work or subsequent maintenance.

3.3.3 Dressing

Surfaces where combination of finish dressing, fertilizing, seeding, and mulching is required as specified in 1.3 above shall be prepared for fertilizing and seeding by finish dressing so as to produce smooth profiles, crown widths, and end slopes.

3.4 APPLICATION OF FERTILIZER

Fertilizer shall be distributed uniformly over the areas to be seeded at a rate which will supply not less than 40 pounds of available nitrogen, 40 pounds of available phosphorous, and 40 pounds of potash per acre. Fertilizer distributed over the surfaces within the reaches where the combination of dressing, fertilizing, seeding, and mulching is required as specified in 3.1 above shall be incorporated into the soil by light disking, harrowing, or other acceptable methods immediately following the application.

3.5 SEEDING

3.5.1 General

Seed sown shall consist of 14 pounds of Big Blue Stem, 8 pounds of Switch grass, 30 pounds of Tall Fescue (Alta or Kentucky 31) (Endophyte Fungus Free), 15 pounds of Bermuda grass and 30 pounds of Serecia Lespedeza per acre. A satisfactory method of sowing shall be employed, using approved mechanical power-drawn seeders, mechanical hand-seeders, broadcast-seeders, or other approved methods. When conditions are such by reason of drought, high winds, excessive moisture, or other factors that satisfactory results are not likely

to be obtained, work shall be halted as directed and resumed only when conditions are favorable or when approved alternative or corrective measures and procedures have been effected. If inspection either during seeding operations or after there is a show of green indicates that areas have been left unplanted, additional seed shall be sown if so directed.

3.5.2 Broadcast Seeding

Seed shall be broadcast with approved sowing equipment and distributed uniformly over the areas. Seed shall not be broadcast during windy weather.

3.5.3 Damage to Seeding

The Contractor shall be fully responsible for any damage to the seeded areas caused by his operations. Areas that become damaged as a result of poor workmanship or failure to meet the requirements of the specifications may be ordered to be repaired and reseeded to specification requirements, without additional cost to the Government.

3.6 APPLYING AND ANCHORING MULCH

Mulch shall be spread uniformly in a continuous blanket, using 2 tons per acre of straw mulch or 1,200 pounds per acre of wood cellulose fiber mulch. Straw mulch shall be spread either by hand or by a manure spreader or by a modified grain combine with straw-spreader attachment or by a blower-type mulch spreader. Mulching shall be started at the windward side of relatively flat areas, or at the upper part of a steep slope, and continued uniformly until the area is covered. The mulch shall not be bunched. Immediately following spreading, straw mulch shall be anchored to the soil by a V-type-wheel land packer, a scalloped-disk or other suitable equipment operated parallel to the embankment centerline. The number of passes needed, not to exceed three, will be determined by the Contracting Officer. Wood cellulose fiber mulch shall be applied with equipment conforming to the requirements of 3.2 above.

3.7 COMPACTING

Immediately after seeding operations have been completed upon the surfaces where the combination of dressing, fertilizing, seeding, and mulching is required as specified in 1.3 above, such surfaces shall be compacted by one pass of a cultipacker, corrugated roller, or other approved equipment weighing 100 to 160 pounds per linear foot of roller. The roller shall be operated parallel to the centerline of the channel.

3.8 HYDRAULIC SLURRY METHOD

In lieu of spreading fertilizer, sowing seed, applying mulch, and compacting as specified hereinabove, the hydraulic slurry method of fertilizing, seeding, and mulching, or any combination thereof, may be used by the Contractor, except that in no event shall the mulch be applied prior to fertilizing and seeding. Equipment to be used for application of materials by the hydraulic slurry method shall conform to the requirements specified in 3.2 above.

--End of Section--

Invitation No. DACW66-00-B-0003

DIVISION 3 - CONCRETE

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DIVISION 16 - ELECTRICAL

(NOT USED)

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