

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE	PAGE OF PAGES	
			J	1	18
2. AMENDMENT/MODIFICATION NO. 0001	3. EFFECTIVE DATE 18-May-2004	4. REQUISITION/PURCHASE REQ. NO. W38XGR-4061-7095		5. PROJECT NO.(If applicable)	
6. ISSUED BY US ARMY ENGINEER DISTRICT, MEMPHIS 167 N MAIN STREET B202 MEMPHIS TN 38103-1894	CODE W912EQ	7. ADMINISTERED BY (If other than item 6) <b>See Item 6</b>		CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)			X	9A. AMENDMENT OF SOLICITATION NO. W912EQ-04-B-0012	
			X	9B. DATED (SEE ITEM 11) 11-May-2004	
				10A. MOD. OF CONTRACT/ORDER NO.	
				10B. DATED (SEE ITEM 13)	
CODE	FACILITY CODE		11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS		
<input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input checked="" type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning <u>1</u> copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required)					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) This solicitation for Stone Dike Construction in the Mississippi River at Drivers Bar-located at Lauderdale County, TN and Mississippi County, AR, scheduled to open 10 June at 2:30 P.M. is amended as follows:  1. Add the attached section 01451A Contractor Quality Control.  2. Delete section 02100 Construction Procedures and replace with the attached 02100 Construction Procedures.  3. Add the attached Safety sign to the end of section 00800.  Continued on Next Page					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)		
			TEL: _____ EMAIL: _____		
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA  BY _____ (Signature of Contracting Officer)		16C. DATE SIGNED 18-May-2004	

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**The following items are applicable to this modification:**

SECTION SF30 - BLOCK 14 CONTINUATION PAGE

BLOCK 14 CONTINUED

4. Add the attached Eng Form 4025-R (Transmittal of Shop Drawings, Equipment Data, Material Samples, or Manufacturer's Certificates of Compliance) and Eng Form 4288 (Submittal Register) to the end of section 01330.
5. Add the attached Eng Form Eng Form 4055 (RipRap Graduation Curves) to the end of section 02380A.
6. Add the attached Plate I (Example Gradation) to the end of section 02380A.
7. Add the attached Plate II (Gradation Graded Stone A) to end of section 02380A.

## SECTION 01451A

### 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 within the text by basic designation only.

##### ASTM INTERNATIONAL (ASTM)

**ASTM D 3740** (2001) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction

**ASTM E 329** (2002) Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

##### 1.2 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control program, and all costs associated therewith shall be included in the applicable unit prices or lump sum prices contained in the Bidding Schedule.

#### PART 2 PRODUCTS (NOT APPLICABLE)

#### PART 3 EXECUTION

##### 3.1 GENERAL REQUIREMENTS

The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the Contract Clause titled "Inspection of Construction". The quality control system shall consist of plans, procedures, and organization necessary to produce an end product which complies with the contract requirements. The system shall cover all operations, both onsite and offsite, and shall be keyed to the proposed construction sequence. The site project superintendent will be held responsible for the quality of work on the job and is subject to removal by the Contracting Officer for non-compliance with the quality requirements specified in the contract. The site project superintendent in this context shall be the highest level manager responsible for the overall construction activities at the site, including quality and production. The site project superintendent shall maintain a

physical presence at the site at all times, except as otherwise acceptable to the Contracting Officer, and shall be responsible for all construction and construction related activities at the site.

## 3.2 QUALITY CONTROL PLAN

The Contractor shall furnish for review by the Government, not later than 10 calendar days after receipt of notice of award, the Contractor Quality Control (CQC) Plan proposed to implement the requirements of the Contract Clause titled "Inspection of Construction." The plan shall identify personnel, procedures, control, instructions, tests, records, and forms to be used. The Government will consider an interim plan for the first 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.

### 3.2.1 Content of the CQC Plan

The CQC Plan shall include, as a minimum, the following to cover all construction operations, both onsite and offsite, including work by subcontractors, fabricators, suppliers, and purchasing agents:

- a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff shall implement the three phase control system for all aspects of the work specified. The staff shall include a CQC System Manager who shall report to the project superintendent.
- b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.
- c. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work which is not in compliance with the contract. The CQC System Manager shall issue letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities. Copies of these letters shall also be furnished to the Government.
- d. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, offsite fabricators, suppliers, and purchasing agents. These procedures shall be in accordance with Section 01330 SUBMITTAL PROCEDURES.
- e. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be

tested, test frequency, and person responsible for each test. (Laboratory facilities approved by the Contracting Officer shall be used.)

- f. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.
- g. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures shall establish verification that identified deficiencies have been corrected.
- h. Reporting procedures, including proposed reporting formats.
- i. A list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks, has separate control requirements, and may be identified by different trades or disciplines, or it may be work by the same trade in a different environment. Although each section of the specifications may generally be considered as a definable feature of work, there are frequently more than one definable features under a particular section. This list will be agreed upon during the coordination meeting.

### 3.2.2 Acceptance of Plan

Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves the right to require the Contractor to make changes in his CQC Plan and operations including removal of personnel, as necessary, to obtain the quality specified.

### 3.2.3 Notification of Changes

After acceptance of the CQC Plan, the Contractor shall notify the Contracting Officer in writing of any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

## 3.3 COORDINATION MEETING

After the Preconstruction Conference, before start of construction, and prior to acceptance by the Government of the CQC Plan, the Contractor shall meet with the Contracting Officer or Authorized Representative and discuss the Contractor's quality control system. The CQC Plan shall be submitted for review a minimum of 5 calendar days prior to the Coordination Meeting. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the CQC operations, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting shall be prepared by the Government and signed by both the Contractor and the Contracting Officer. The minutes shall become a part of the contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual

understandings and/or address deficiencies in the CQC system or procedures which may require corrective action by the Contractor.

### 3.4 QUALITY CONTROL ORGANIZATION

#### 3.4.1 Personnel Requirements

The requirements for the CQC organization are a CQC System Manager and sufficient number of additional qualified personnel to ensure safety and contract compliance. The Safety and Health Manager shall receive direction and authority from the CQC System Manager and shall serve as a member of the CQC staff. Personnel identified in the technical provisions as requiring specialized skills to assure the required work is being performed properly will also be included as part of the CQC organization. The Contractor's CQC staff shall maintain a presence at the site at all times during progress of the work and have complete authority and responsibility to take any action necessary to ensure contract compliance. The CQC staff shall be subject to acceptance by the Contracting Officer. The Contractor shall provide adequate office space, filing systems and other resources as necessary to maintain an effective and fully functional CQC organization. Complete records of all letters, material submittals, shop drawing submittals, schedules and all other project documentation shall be promptly furnished to the CQC organization by the Contractor. The CQC organization shall be responsible to maintain these documents and records at the site at all times, except as otherwise acceptable to the Contracting Officer.

#### 3.4.2 CQC System Manager

The Contractor shall identify as CQC System Manager an individual within the onsite work organization who shall be responsible for overall management of CQC and have the authority to act in all CQC matters for the Contractor. The CQC System Manager shall be a graduate engineer or a graduate of construction management, with a minimum of 5 years construction experience on construction similar to this contract. This CQC System Manager shall be on the site at all times during construction and shall be employed by the prime Contractor. The CQC System Manager shall be assigned as System Manager but may have duties as project superintendent in addition to quality control. An alternate for the CQC System Manager shall be identified in the plan to serve in the event of the System Manager's absence. The requirements for the alternate shall be the same as for the designated CQC System Manager.

#### 3.4.3 CQC Personnel

In addition to CQC personnel specified elsewhere in the contract, the Contractor shall provide as part of the CQC organization specialized personnel to assist the CQC System Manager for the following areas: civil and a survey technician. These individuals shall be directly employed by the prime Contractor and may not be employed by a supplier or sub-contractor on this project; be responsible to the CQC System Manager; be physically present at the construction site during work on their areas of responsibility; have the necessary education and/or experience in accordance with the experience matrix listed herein. These individuals

may perform other duties but must be allowed sufficient time to perform their assigned quality control duties as described in the Quality Control Plan.

### Experience Matrix

Area	Qualifications
a. Civil	Graduate Civil Engineer with 2 years experience in the type of work being performed on this project or technician with 5 yrs related experience
b. Survey	Surveyor with 5 yrs experience in hydrographic and topographic surveying

#### 3.4.4 Additional Requirement

In addition to the above experience and/or education requirements the CQC System Manager shall have completed the course entitled "Construction Quality Management For Contractors". This course is periodically offered at the Memphis District. For further details and for the class schedule see the following website [http://155.76.117.11/conops/const\\_quality.htm](http://155.76.117.11/conops/const_quality.htm).

#### 3.4.5 Organizational Changes

The Contractor shall maintain the CQC staff at full strength at all times. When it is necessary to make changes to the CQC staff, the Contractor shall revise the **CQC Plan** to reflect the changes and submit the changes to the Contracting Officer for acceptance.

### 3.5 SUBMITTALS AND DELIVERABLES

Submittals, if needed, shall be made as specified in Section 01330 SUBMITTAL PROCEDURES. The CQC organization shall be responsible for certifying that all submittals and deliverables are in compliance with the contract requirements.

### 3.6 CONTROL

Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the contract. At least three phases of control shall be conducted by the CQC System Manager for each definable feature of the construction work as follows:

### 3.6.1 Preparatory Phase

This phase shall be performed prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. This phase shall include:

- a. A review of each paragraph of applicable specifications, reference codes, and standards. A copy of those sections of referenced codes and standards applicable to that portion of the work to be accomplished in the field shall be made available by the Contractor at the preparatory inspection. These copies shall be maintained in the field and available for use by Government personnel until final acceptance of the work.
- b. A review of the contract drawings.
- c. A check to assure that all materials and/or equipment have been tested, submitted, and approved.
- d. Review of provisions that have been made to provide required control inspection and testing.
- e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the contract.
- f. A physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
- g. A review of the appropriate activity hazard analysis to assure safety requirements are met.
- h. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.
- i. A check to ensure that the portion of the plan for the work to be performed has been accepted by the Contracting Officer.
- j. Discussion of the initial control phase.
- k. The Government shall be notified at least 24 hours in advance of beginning the preparatory control phase. This phase shall include a meeting conducted by the CQC System Manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. The results of the preparatory phase actions shall be documented by separate minutes prepared by the CQC System Manager and attached to the daily CQC report. The Contractor shall

instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.

### 3.6.2 Initial Phase

This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:

- a. A check of work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.
- b. Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing.
- c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with required sample panels as appropriate.
- d. Resolve all differences.
- e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
- f. The Government shall be notified at least 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 onsite, or any time acceptable specified quality standards are not being met.

### 3.6.3 Follow-up Phase

Daily checks shall be performed to assure control activities, including control testing, are providing continued compliance with contract requirements, until completion of the particular feature of work. The checks shall be made a matter of record in the CQC documentation. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work. The Contractor shall not build upon nor conceal non-conforming work.

### 3.6.4 Additional Preparatory and Initial Phases

Additional preparatory and initial phases shall be conducted on the same definable features of work if: the quality of on-going work is unacceptable; if there are changes in the applicable CQC staff, onsite production supervision or work crew; if work on a definable feature is resumed after a substantial period of inactivity; or if other problems develop.

## 3.7 TESTS

### 3.7.1 Testing Procedure

The Contractor shall perform specified or required tests to verify that control measures are adequate to provide a product which conforms to contract requirements. Upon request, the Contractor shall furnish to the Government duplicate samples of test specimens for possible testing by the Government. Testing includes operation and/or acceptance tests when specified. The Contractor shall procure the services of a Corps of Engineers approved testing laboratory or establish an approved testing laboratory at the project site. The Contractor shall perform the following activities and record and provide the following data:

- a. Verify that testing procedures comply with contract requirements.
- b. Verify that facilities and testing equipment are available and comply with testing standards.
- c. Check test instrument calibration data against certified standards.
- d. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.
- e. Results of all tests taken, both passing and failing tests, shall be recorded on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test shall be given. If approved by the Contracting Officer, actual test reports may be submitted later with a reference to the test number and date taken. An information copy of tests performed by an offsite or commercial test facility shall be provided directly to the Contracting Officer. Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this contract.

### 3.7.2 Testing Laboratories

#### 3.7.2.1 Laboratory Validation

A testing laboratory validated by the Material Testing Center (MTC) of the Corps of Engineers shall perform all testing of soil, gravel, aggregate, stone, concrete, and asphalt. Refer to <http://www.wes.army.mil/SL/MTC/ValStatesTbl.htm> for a complete and current list of validated commercial laboratories. This website is maintained by the MTC. If the Contractor proposes to use a commercial laboratory that is not validated or set up an on-site laboratory, he/she shall make arrangements for validation by contacting the Material Testing Center at Waterways Experiment Station, Vicksburg, Mississippi, telephone number: 601-634-2496 or 601-634-3610, <http://www.wes.army.mil/SL/MTC/inspection.htm>. The Government will not be responsible for any cost associated with the validation of laboratories that are not currently

validated. The validation process could take 60 to 90 days or more. The Contractor shall be responsible for determining the amount of time required for the validation of the proposed laboratory and accounting for this event in his/her progress schedule. If the Contractor elects to use a non-validated laboratory, the work that requires testing shall not commence until the laboratory has been validated by MTC.

### 3.7.2.2 Capability Check

The Government reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the contract specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for testing soils, concrete, asphalt, and steel shall meet criteria detailed in [ASTM D 3740](#) and [ASTM E 329](#).

### 3.7.2.3 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 Onsite Laboratory

The Government reserves the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests, and to check the Contractor's testing procedures, techniques, and test results at no additional cost to the Government.

### 3.7.4 Furnishing or Transportation of Samples for Testing

Costs incidental to the transportation of samples or materials shall be borne by the Contractor. Samples of materials for test verification and acceptance testing by the Government shall be delivered to the Corps of Engineers Division Laboratory, f.o.b., at the following address:

For delivery by mail: Shall be delivered as directed by the appropriate Area Office listed below.

Coordination for each specific test, exact delivery location, and dates will be made through the Caruthersville Area Office.

## 3.8 COMPLETION INSPECTION

### 3.8.1 Punch-Out Inspection

Near the end of the work, or any increment of the work established by a time stated in the SPECIAL CONTRACT REQUIREMENTS Clause, "Commencement, Prosecution, and Completion of Work", or by the specifications, the CQC Manager shall conduct an inspection of the work. A punch list of items which do not conform to the approved drawings and specifications shall be prepared and included in the CQC documentation, as required by paragraph DOCUMENTATION. The list of deficiencies shall include the estimated date by which the deficiencies will be corrected. The CQC System Manager or staff shall make a second inspection to ascertain that all deficiencies have been corrected. Once this is accomplished, the Contractor shall notify the Government that the facility is ready for the Government Pre-Final inspection.

### 3.8.2 Pre-Final Inspection

The Government will perform the Pre-Final Inspection to verify that the facility is complete and ready to be occupied. A Government Pre-Final Punch List may be developed as a result of this inspection. The Contractor's CQC System Manager shall ensure that all items on this list have been corrected before notifying the Government, so that a Final inspection with the customer can be scheduled. Any items noted on the Pre-Final inspection shall be corrected in a timely manner. These inspections and any deficiency corrections required by this paragraph shall be accomplished within the time slated for completion of the entire work or any particular increment of the work if the project is divided into increments by separate completion dates.

### 3.8.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the Contracting Officer's Representative shall be in attendance at the final acceptance inspection. Additional Government personnel including, but not limited to, those from Base/Post Civil Facility Engineer user groups, and major commands may also be in attendance. The final acceptance inspection will be formally scheduled by the Contracting Officer based upon results of the Pre-Final inspection. Notice shall be given to the Contracting Officer at least 14 days prior to the final acceptance inspection and shall include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining work performed under the contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance with the contract clause titled "Inspection of Construction".

## 3.9 DOCUMENTATION

The Contractor shall maintain current records providing factual evidence that required quality control activities and/or tests have been performed. These records shall include the work of subcontractors and suppliers and shall be on an acceptable form that includes, as a minimum, the following information:

- a. Contractor/subcontractor and their area of responsibility.
- b. Operating plant/equipment with hours worked, idle, or down for repair.
- c. Work performed each day, giving location, description, and by whom. When Network Analysis System (NAS) is used, identify each phase of work performed each day by NAS activity number.
- d. Test and/or control activities performed with results and references to specifications/drawings requirements. The control phase shall be identified (Preparatory, Initial, Follow-up). List of deficiencies noted, along with corrective action.
- e. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.
- f. Submittals and deliverables reviewed, with contract reference, by whom, and action taken.
- g. Offsite surveillance activities, including actions taken.
- h. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
- 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 48 hours after the date covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, one report shall be prepared and submitted for every 7 days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the CQC System Manager. The report from the CQC System Manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

### 3.10 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed

sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

■ End of Section –

## **02100**

### **CONSTRUCTION PROCEDURES**

#### **PART 1 GENERAL**

##### **1.1 SCOPE**

The work provided for herein consists of furnishing all plant, labor, material, and equipment and performing all work in strict accordance with the specifications, schedules, and drawings, for the construction of stone weirs in the Mississippi River. The work shall be completed as expeditiously as possible. The work requires steady and uninterrupted progress to minimize loss of stone during construction. The Contractor shall diligently prosecute the work and provide the necessary equipment, a skilled and experienced crew, and a regular and well-balanced supply of stone to ensure uniform and continuous progress once construction of a weir has been started.

##### **1.2 RIVER STAGE LIMITATIONS**

Unless otherwise authorized by the Contracting Officer, subaqueous placement of stone will not be permitted on any weir when the river stages are above +20 LWRP or below -10 LWRP at the jobsite. Work will also not be required on any weir if a 6-foot continuous channel does not exist from the navigation channel to some work point on the weir where work is required.

##### **1.3 NOTIFICATION OF U.S. COAST GUARD PRIOR TO BEGINNING WORK**

At least 15 days prior beginning work, and upon demobilization from or completion of the work, the Contractor shall notify the U.S. Coast Guard at 901-544-3912. Collect calls will not be accepted. A copy of this notification will be provided to the Contracting Officer.

##### **1.4 CONTACT PILOT**

The contractor will provide a Contact Pilot 24 hours per day at the site. The contact Pilot will monitor, control, and direct traffic to facilitate the safe, timely, passage of river traffic. As the Contact Pilot deems necessary, recommendation will be made to the U.S. Coast Guard to close the river to traffic. Any required river closure shall be between the hours of 6:00 A.M. and 6:00 P.M. The Contact Pilot will inform Quality Assurance Representative, to suspend the Contractor's operations if conditions are such that passage of traffic is found to be unsafe. When the river is closed by the U.S. Coast Guard, the Contact Pilot will be responsible for controlling, passing, or stopping river traffic. The Contact Pilot must be legally licensed to operate an uninspected towing vessel and also have a minimum of ten (10) years experience operating tows on the Lower Mississippi River.

At the end of each day's operations, the Contact Pilot will decide when it is safe for river traffic to resume. The Contact Pilot will decide the priority for passing of river traffic. The Contact Pilot will be responsible for issuing a "Security Broadcast" every hour on a 24 hours per day basis. This will not apply whenever operations are suspended due to river stages or other conditions. The Broadcast will give the conditions and procedures for navigating this reach of the river.

## 1.5 RIVER TRAFFIC MANAGEMENT

The Contractor shall submit to the Contracting Officer as soon as possible following receipt of Notice of Award but not later than the Preconstruction Conference, a river traffic management plan. The plan will attempt to minimize delays to the river traffic traveling upstream and downstream of the construction site. The plan shall describe in detail all phases of the Contractor's proposed method of passing traffic at the site during construction operations and must be approved by the Contracting Officer prior to commencement of construction. The plan shall also include the method that will be used by the Contact Pilot to maximize the passage of queued tows during the twelve (12) hour non-work period each day. Tows that are required by the Contact Pilot to stop between River Miles 786 and 767 will be considered to be in the queue. When the queue is estimated to be more than twelve (12) hours (i.e. cannot be cleared during the next anticipated open river period), the Contracting Officer may direct that the Contractor's construction operations be placed in standby until the queue is sufficiently reduced. The Government shall pay the Contractor the bid amount for standby time for each hour of scheduled work delayed by this action. This is to accommodate river traffic only and is exclusive of other suspension of work considerations as described in Contract Clause 52.242-14 SUSPENSION OF WORK (APR 1984).

## 1.6 ALIGNMENT CONTROL PLAN FOR WEIRS 8-10

Unless otherwise authorized or approved by the Contracting Officer, construction of weirs 8, 9, and 10 shall have an additional requirement for control of stone placement. The contractor shall submit an alignment control plan to the Contracting Officer for approval prior to placement of any stone. The plan shall outline required horizontal and vertical control, the procedure, and equipment that will be used by the contractor for alignment control during the construction of weirs 8 - 10. Due to the existing bluff and limited established control points, the contractor shall have a qualified survey technician on site at all times during construction of weirs 8 - 10. The contractor should consider using DGPS with Radio Beacon Broadcast or other appropriate methods for this complex construction.

## 1.7 PROSECUTION OF WORK

The Contractor shall not suspend work or remove any equipment from this location, which in the opinion of the Contracting Officer, is required for orderly progress of the work. This prohibition will not apply during any period when work is suspended due to river stages, weather, or other conditions outside the control of the Contractor.

## 1.8 ORDER OF WORK

(1) Unless otherwise approved or directed by the Contracting Officer, the order of work shall be to begin constructing Weir No. 10 and work upstream to Weir No. 1. Riprap paving shall be placed concurrently with the Bendway Weir Construction.

(2) Concurrent weir construction will be permitted provided that sufficient equipment and stone sources are available and it does not slow construction priority of the weirs as listed in the ORDER OF WORK paragraph above. The Contractor shall give a minimum of 48 hours prior notice before beginning or resuming construction in this contract.

(3) The Contractor shall be responsible for the protection of threatened and endangered animal and plant species including their habitat in accordance with Federal, State, Regional, and local laws and regulations. In the Memphis District particular attention is on the least tern and pallid sturgeon.

a. The spawning season for the Pallid Sturgeon is usually between 12 April and 30 June. No construction activities will be allowed during this time period.

b. The critical nesting period for the Least Tern is usually between 15 May and 31 July. These dates might be extended depending on Mississippi River stage elevations. If surveys reveal breeding activity within one-half mile of the proposed construction site, construction activities will not be allowed unless approved by the Contracting Officer in conjunction with Memphis District environmental personnel and appropriate state and federal agencies.

(4) Unless otherwise directed by the Contracting Officer, the Contractor will be directed to cease all construction operations approximately 1 October 2004. This requirement is to minimize potential adverse impacts to the towing industry. The Contractor shall resume work approximately 1 January 2005 if river stages are favorable for construction. No time will be counted toward contract completion during this period of non-work.

## PART 2 PRODUCTS (NOT USED)

## PART 3 EXECUTION

### 3.1 WEIR CONSTRUCTION

Unless otherwise authorized or directed by the Contracting Officer, construction of the contract weir(s) shall be performed in accordance with the following procedure:

#### 3.1.1 Bendway Weirs

Prior to stone placement, a survey will be taken along the centerline of each of the proposed weirs. Each survey shall consist of a profile being taken from water's edge proceeding riverward 200 feet beyond the end of the proposed weir. If this survey does not reflect what

has been given on the plans as the centerline profile for the proposed weir, the Contracting Officer and River Engineering must be immediately notified prior to any stone being placed.

Unless otherwise authorized or directed by the Contracting Officer, each weir shall be constructed to grade and section in one lift proceeding riverward from the landward limit. However, to minimize potential scour, a stone blanket will be required in front of the stone that has been placed to grade and section. This stone blanket will be constructed at the end of each shift or whenever placement operations are suspended for more than four (4) hours. The blanket shall extend 200 feet riverward of the section and shall be placed at a minimum rate of 30 tons per foot along the downstream toe of the base section. This blanket is not required past the limits of the weir shown on the plans.

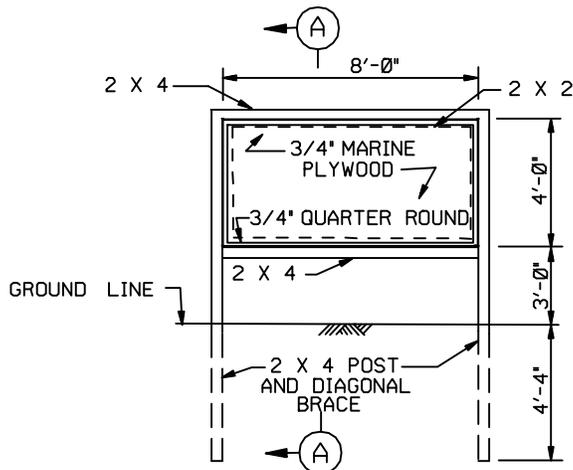
-- End of Section --

#### **SUMMARY OF CHANGES**

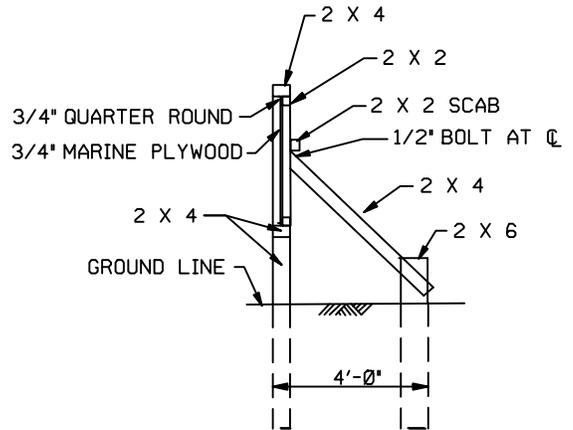
(End of Summary of Changes)



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

<b>TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE</b> <i>(Read instructions on the reverse side prior to initiating this form)</i>	DATE	TRANSMITTAL NO.
---	------	-----------------

**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
---------	--

**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.

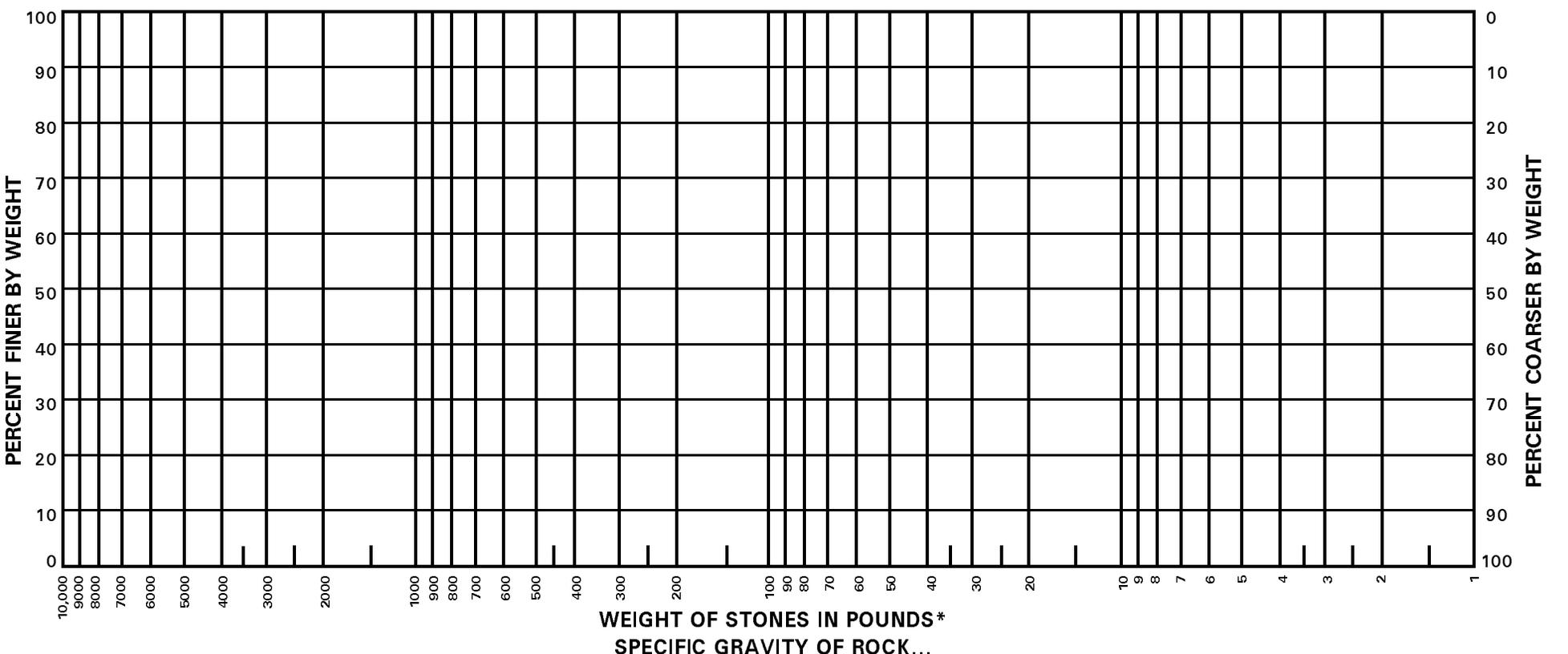
### THE FOLLOWING ACTION CODES ARE GIVEN TO ITEMS SUBMITTED

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> )

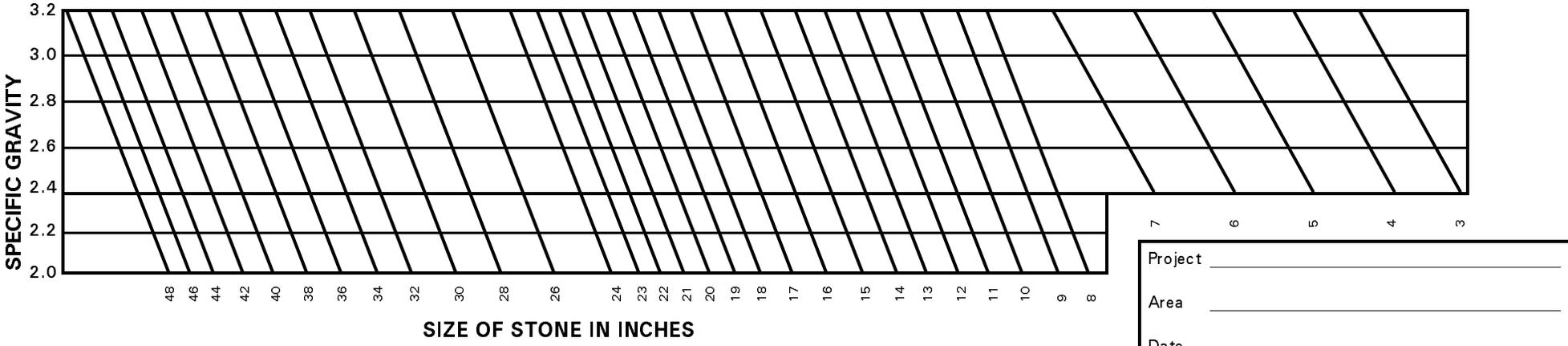
10. Approval of items does not relieve the contractor from complying with all the requirements of the contact plans and specifications.

*(Reverse of ENG Form 4025-R)*





\*ASSUMING STONE SHAPE MIDWAY BETWEEN A SPHERE AND CUBE

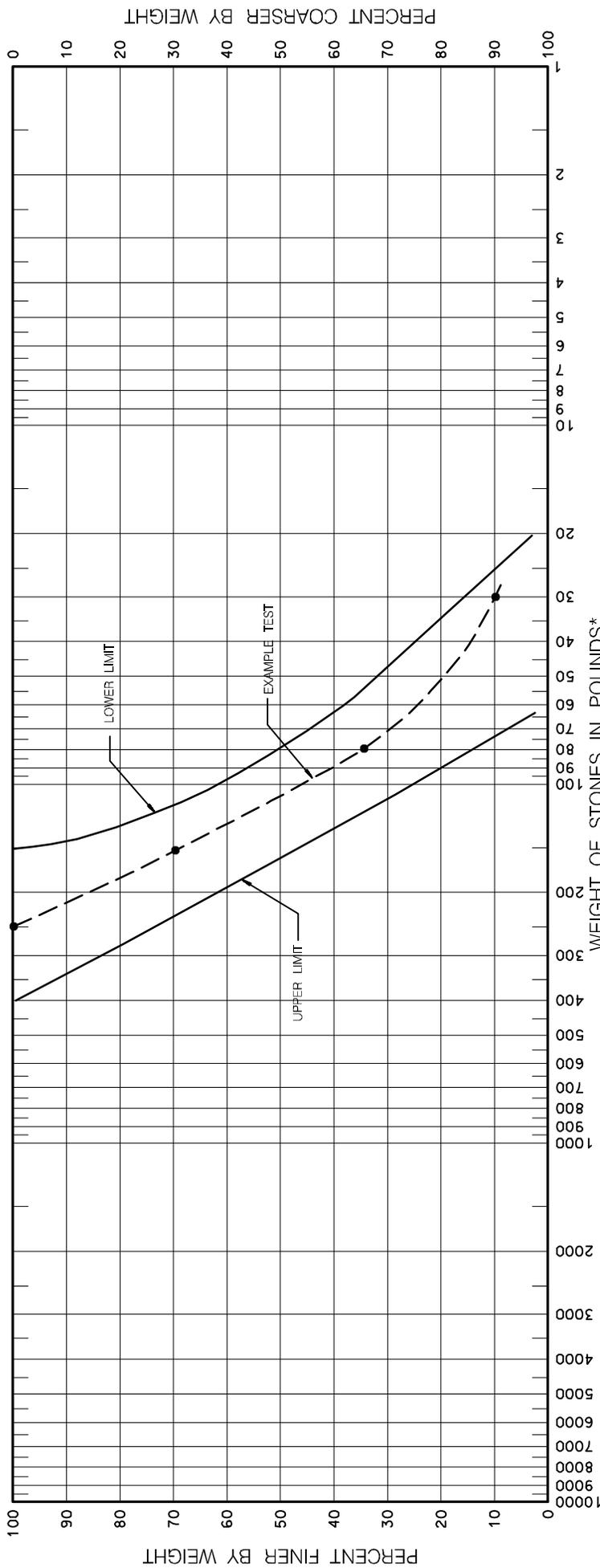


Project \_\_\_\_\_

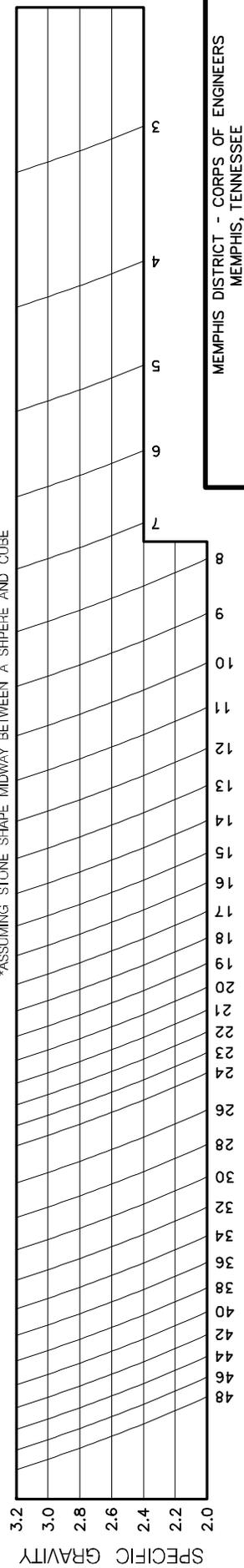
Area \_\_\_\_\_

Date \_\_\_\_\_

**RIPRAP GRADUATION CURVES**



SPECIFIC GRAVITY OF ROCK \_\_\_\_\_  
 \*ASSUMING STONE SHAPE MIDWAY BETWEEN A SPHERE AND CUBE

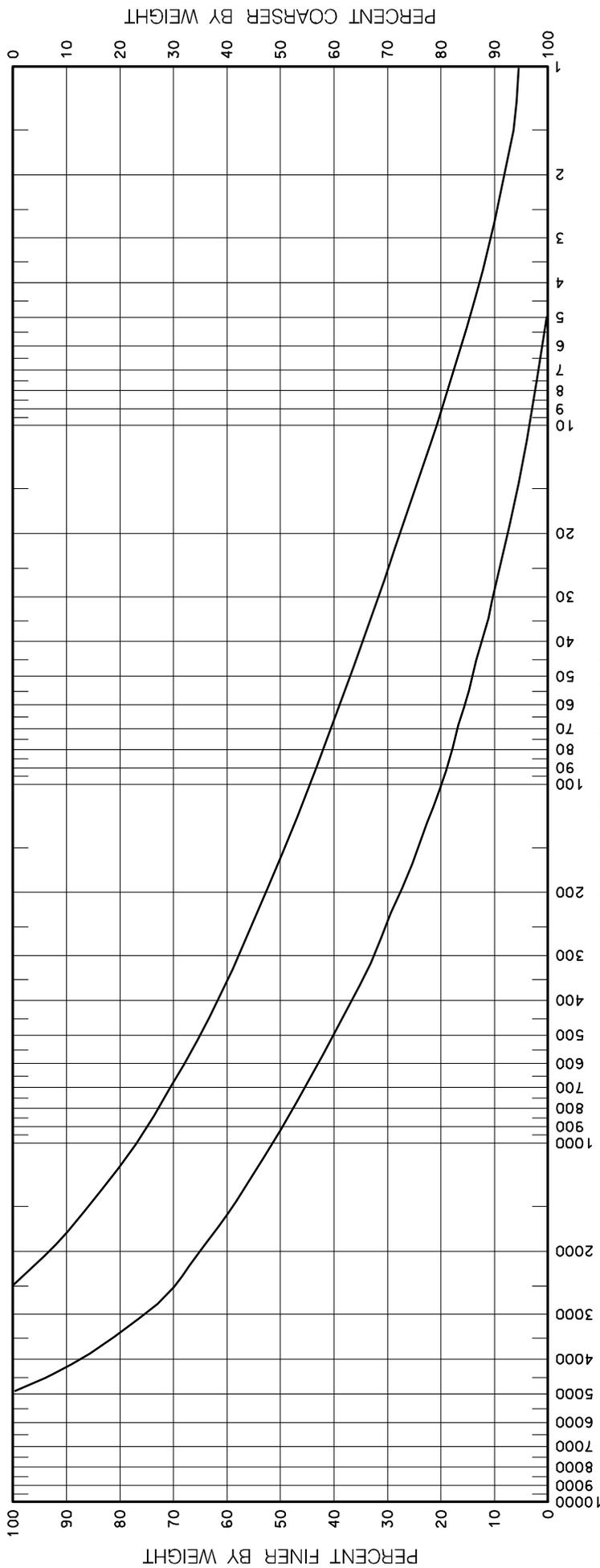


MEMPHIS DISTRICT - CORPS OF ENGINEERS  
 MEMPHIS, TENNESSEE

# EXAMPLE GRADATION

PROJECT: \_\_\_\_\_ DATE: \_\_\_\_\_

RIPRAP GRADATION CURVES



**CUMULATIVE %  
FINER BY WEIGHT**

**STONE WEIGHT  
POUNDS**

- |      |        |
|------|--------|
| 5000 | 100    |
| 2500 | 70-100 |
| 500  | 40-65  |
| 100  | 20-45  |
| 5    | 0-15   |
| 1    | 0-5    |

NOT MORE THAN 5% BY WEIGHT FINER THAN A 1/2 INCH SCREEN

MEMPHIS DISTRICT - CORPS OF ENGINEERS  
MEMPHIS, TENNESSEE

**GRADATION  
GRADED STONE A**

PROJECT: \_\_\_\_\_ DATE: \_\_\_\_\_

SEPTEMBER 1976