IFB W912BU-04-B-0008

US Army Corps
of Engineers
Philadelphia District

Beach Nourishment

Cape May Inlet to Lower Township
and
Lower Cape May Meadows – Cape May Point

Cape May, New Jersey

Construction Solicitation and Specifications

09 APRIL 2004

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CAUTION TO BIDDERS

All information required by the terms of the Solicitation must be furnished. MISTAKES OR OMISSIONS CAN BE COSTLY. Important items for you to check are included in but not limited to those listed below. This checklist is furnished only to assist you in submitting a proper bid. Check as you read.

[ ] Are you registered in the Central Contractor Database? See DFARS Clause 252.204-7004 “Required Central Contractor Registration” in Section 00700 of this solicitation?

[ ] Are in compliance with the VETS-100 reporting requirement? See FAR 52. 52.222-37 “Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans in Section” in Section 00700 of this solicitation?

[ ] Have you acknowledged all amendments? Have you submitted your bid on the latest amended bid schedule?

[ ] Have you completed the "Representations and Certifications" {Section 00600} portion of the Solicitation? Is your Contractor Establishment Code listed on the Standard Form 1442?

[ ] Is your bid properly signed by an officer of your company?

[ ] If a bid guarantee is required, is it included with your bid and is it in the proper amount? {Usually 20 percent of the total bid price, including any options or additives.} If your bid guarantee is in the form of a bid bond, is the bond properly signed by both the bidder and surety and are all required seals affixed? A bid guarantee is required when your bid exceeds $100,000.00. A late bid guarantee is treated the same as a late bid.

[ ] Is the name in which you submitted the bid the same on your bid as on the bid bond?

[ ] If required, have you entered a unit price for each bid item? {The solicitation will specifically state when this is necessary.}

[ ] The Government may reject a bid as nonresponsive if it is materially and mathematically unbalanced as to price for any bid item or combination of items. A bid is unbalanced when it is based on prices significantly less than cost for some work and prices which are significantly overstated for other work.

[ ] Are decimals in unit prices in the proper places? Are your figures legible?

[ ] Are the extensions of your unit prices, and your total bid price correct?

[ ] Are all erasures or corrections initialed by the person signing the bid?

[ ] Have you restricted your bid by altering the provisions of the solicitation?

[ ] If you are a large business and your bid is greater than $500,000 for service or $1,000,000.00 for construction have you included your Sub-Contracting Plan in your bid package? (NOTE: PLEASE REFER TO SUBCONTRACTING PLAN IN SOLICITATION FOR GOALS).

[ ] Is the envelope containing your bid properly identified that it is a sealed bid and does it contain the correct solicitation number and bid opening time?

[ ] Will your bid arrive on time? See paragraph entitled "Late Submissions, Modifications, and Withdrawals of Bids" in the Instructions to Bidders {Section 00100} of the solicitation.

February 24, 2004

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INVITATION N0. W912BU-04-B-0008

PHILADELPHIA DISTRICT
CORPS OF ENGINEERS

INVITATION FOR BIDS
FOR

BEACH NOURISHMENT

CAPE MAY INLET TO LOWER TOWNSHIP
CAPE MAY, NEW JERSEY

I. NOTE THE AFFIRMATIVE ACTION REQUIREMENT OF THE EQUAL OPPORTUNITY CLAUSE WHICH MAY APPLY TO THE CONTRACT RESULTING FROM THIS SOLICITATION.

II. BIDDERS ARE REQUIRED TO COMPLETE THE REPRESENTATION AND CERTIFICATIONS PORTION OF SECTION 00600 OF THIS SOLICITATION AND SUBMIT THIS WITH THEIR BIDS.

09 April 2004

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SOLICITATION, OFFER, AND AWARD *(Construction, Alteration, or Repair)*	1. SOLICITATION NO.	2. TYPE OF SOLICITATION	3. DATE ISSUED	PAGE OF PAGES
	W912BU-04-B-0008	☒ SEALED BID *(IFB)* ☐ NEGOTIATED *(RFP)*	4/9/04	1

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

4. CONTRACT NO.	5. REQUISITION/PURCHASE REQUEST NO.	6. PROJECT NO.
	W25PHS-4037-6942	

7. ISSUED BY CODE

US Army Engineer District, Philadelphia
Wanamaker Building, 100 Penn Square East
Philadelphia, Pennsylvania 19107-3390

8. ADDRESS OFFER TO

9. FOR INFORMATION CALL:	A. NAME	B. TELEPHONE NO. *(Include area code) (NO COLLECT CALLS)*
	Michelle Bertoline	215-656-6914

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):*

SOLICITATION NUMBER: W912BU-04-B-0008

PROJECT TITLE: Cape May Inlet to Lower Township and Lower Cape May Meadows, Cape May Point, New Jersey

ISSUE DATE: 9 April 2004

BID OPENING DATE: 11 May 2004 at 11:00 a.m.

THIS PROCUREMENT IS UNRESTRICTED

There will be a site visit for the beach nourishment project on Wednesday, April 21, 2004 at 10:00 a.m. The site visit will be held at the interesection of Wilmington Avenue and Beach Avenue. A subsequent site visit will immeidately follow at the southeast corner of the Cape May Point State Park parking lot. If you are interested in attending, please contact Lisa Riddick at 215-656-6610 by April 19, 2004 no later than 5:00 p.m.

11. The Contractor shall begin performance within See SC-1 calendar days and complete it within See SC-1 calendar days after receiving ☐ award, ☒ notice to proceed. This performance period is ☒ mandatory, ☐ negotiable. *(See _____.)*

12A. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE AND PAYMENT BONDS? *(If "YES," indicate within how may calendar days after award in Item 12B.)*	12B. CALENDAR DAYS
☒ YES ☐ NO	10

13. ADDITIONAL SOLICITATION REQUIREMENTS:

A. Sealed offers in original and 1 copies to perform the work required are due at the place specified in Item 8 by 11:00 a.m. *(hour)* local time May 11, 2004 *(date)*. If this is a sealed bid solicitation, offers will be publicly opened at that time. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due.

B. An offer guarantee ☒ 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.

OFFER *(Must be fully completed by offeror)*

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

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

AMOUNTS ▶

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

19. ACKNOWLEDGMENT OF AMENDMENTS

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

AMENDMENT 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 ☐ 10 U.S.C 2304(c) ( ) ☐ 41 U.S.C 253(c) ( )
26. ADMINISTERED BY CODE		27. PAYMENT WILL BE MADE BY

CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE

☐ 28. NEGOTIATED AGREEMENT *Contractor is required to sign this document and return _____ copies to issuing office.)* Contractor agrees to furnish and deliver all items or perform all work requirements identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications incorporated by reference in or attached to this contract.

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

30A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN *(Type or print)*		31A. NAME OF CONTRACTING OFFICER *(Type or print)*	
30B. SIGNATURE	30C. DATE	31B. UNITED STATES OF AMERICA BY	31C. AWARD DATE

BIDDING SCHEDULE

(To be attached to Standard Form 1442)

Item No.	Description	Estimated Quantity	Unit	Unit Price	Estimated Amount
BASE BID:					
1a.	Mobilization and Demobilization	1	Job	L.S.	$
1b.	Beachfill Areas #1 & #2	1,021,700	C.Y.	$	$
1c.	Sea Turtle Modifications and Whale Monitoring (If a Hopper Dredge is not to be used, Enter $0)	1	Job	L.S.	$
1d.	Pedestrian Dune Crossovers	261	LF	$	$
1e.	Vehicle Dune Crossovers	1	Job	L.S.	$
1f.	Handicap Dune Crossovers	970	LF	$	$
1g.	Dune Grass	1	Job	L.S.	$
1h.	Sand Fence	9878	LF	$	$
				TOTAL ESTIMATED BASE BID:	$
OPTION 1:					
2a.	Beachfill - Area #3	696,400	C.Y.	$	$
2b.	Sea Turtle Modifications and Whale Monitoring (If a Hopper Dredge is not to be used, Enter $0)	1	Job	L.S.	$
2c.	Extension of Stormwater Outfalls	270	LF	$	$
2d.	Pedestrian Dune Crossovers	444	LF	$	$

2e.	Vehicle Dune Crossovers	1	Job	L.S.	$
2f.	Dune Grass	1	Job	L.S.	$
2g.	Sand Fence	9600	LF	$	$

TOTAL ESTIMATED OPTION 1: $

OPTION 2:

3.	Beachfill - Area #2	100,000	C.Y.	$	$

TOTAL ESTIMATED OPTION 3: $

OPTION 3:

4.	Beachfill - Area #2	100,000	C.Y.	$	$

TOTAL ESTIMATED OPTION 4: $

OPTION 4:

5.	Beachfill - Area #3	50,000	C.Y.	$	$

TOTAL ESTIMATED OPTION 5: $

OPTION 5:

6.	Beachfill - Area #3	50,000	C.Y.	$	$

TOTAL ESTIMATED OPTION 6: $

TOTAL ESTIMATED BASE BID AND OPTIONS: $

NOTE: Bidders must bid on all items.

52.204-6	Data Universal Numbering System (DUNS) Number	OCT 2003
52.214-3	Amendments To Invitations For Bids	DEC 1989
52.214-4	False Statements In Bids	APR 1984
52.214-5	Submission Of Bids	MAR 1997
52.214-6	Explanation To Prospective Bidders	APR 1984
52.214-7	Late Submissions, Modifications, and Withdrawals of Bids	NOV 1999
52.214-18	Preparation of Bids-Construction	APR 1984
52.214-19	Contract Award-Sealed Bidding-Construction	AUG 1996
52.214-34	Submission Of Offers In The English Language	APR 1991
52.214-35	Submission Of Offers In U.S. Currency	APR 1991
52.214-5000	Apparent Clerical Mistakes	MAR 2000
52.216-1	Type Of Contract	APR 1984
52.217-5	Evaluation Of Options	JUL 1990
52.222-23	Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity for Construction	FEB 1999
52.232-38	Submission of Electronic Funds Transfer Information with Offer	MAY 1999
52.233-2	Service Of Protest	AUG 1996
252.236-7008	Contract Prices-Bidding Schedules	DEC 1991

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52.204-6 DATA UNIVERSAL NUMBERING SYSTEM (DUNS) NUMBER (OCT 2003)

(a) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation “DUNS” or “DUNS+4” followed by the DUNS number or “DUNS+4” that identifies the offeror's name and address exactly as stated in the offer. The DUNS number is a nine-digit number assigned by Dun and Bradstreet, Inc. The DUNS+4 is the DUNS number plus a 4-character suffix that may be assigned at the discretion of the offeror to establish additional CCR records for identifying alternative Electronic Funds Transfer (EFT) accounts (see Subpart 32.11) for the same parent concern.

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

(1) An offeror may obtain a DUNS number--

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

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

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

(i) Company legal business name.

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

(iii) Company physical street address, city, state and Zip Code.

(iv) Company mailing address, city, state and Zip Code (if separate from physical).

(v) Company telephone number.

(vi) Date the company was started.

(vii) Number of employees at your location.

(viii) Chief executive officer/key manager.

(ix) Line of business (industry).

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

(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.

(End of provision)

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 (NOV 1999)

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

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

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

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

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

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

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

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

(End of provision)

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.

(End of provision)

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.

(End of provison)

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)

52.214-5000 APPARENT CLERICAL MISTAKES (MAR 1995)--EFARS

(a) For the purpose of initial evaluations of bids, the following will be utilized in the resolving arithmetic discrepancies found on the face of bidding schedule as submitted by the bidder:
(1) Obviously misplaced decimal points will be corrected;
(2) Discrepancy between unit price and extended price, the unit price will govern;
(3) Apparent errors in extension of unit prices will be corrected;
(4) Apparent errors in addition of lump-sum and extended prices will be corrected.

(b) For the purpose of bid evaluation, the government will proceed on the assumption that the bidder intends his bid to be evaluated on basis of the unit prices, the totals arrived at by resolution of arithmetic discrepancies as provided above and the bid will be so reflected on the abstract of bids.
(c) These correction procedures shall not be used to resolve any ambiguity concerning which bid is low.

(End of statement)

52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a firm fixed priced contract resulting from this solicitation.

(End of clause)

52.217-5 EVALUATION OF OPTIONS (JUL 1990)

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

(End of provision)

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

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

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

Goals for minority participation for each trade	Goals for female participation for each trade
14.5%	6.9%

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

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

project, for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, Executive Order 11246, as amended, and the regulations in 41 CFR 60-4. Compliance with the goals will be measured against the total work hours performed.

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

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

(2) Employer's identification number of the subcontractor;

(3) Estimated dollar amount of the subcontract;

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

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

(e) As used in this Notice, and in any contract resulting from this solicitation, the "covered area" is Cape May, New Jersey.

(End of provision)

52.232-38 SUBMISSION OF ELECTRONIC FUNDS TRANSFER INFORMATION WITH OFFER (MAY 1999)

The offeror shall provide, with its offer, the following information that is required to make payment by electronic funds transfer (EFT) under any contract that results from this solicitation. This submission satisfies the requirement to provide EFT information under paragraphs (b)(1) and (j) of the clause at 52.232-34, Payment by Electronic Funds Transfer--Other than Central Contractor Registration.

(1) The solicitation number (or other procurement identification number).

(2) The offeror's name and remittance address, as stated in the offer.

(3) The signature (manual or electronic, as appropriate), title, and telephone number of the offeror's official authorized to provide this information.

(4) The name, address, and 9-digit Routing Transit Number of the offeror's financial agent.

(5) The offeror's account number and the type of account (checking, savings, or lockbox).

(6) If applicable, the Fedwire Transfer System telegraphic abbreviation of the offeror's financial agent.

(7) If applicable, the offeror shall also provide the name, address, telegraphic abbreviation, and 9-digit Routing Transit Number of the correspondent financial institution receiving the wire transfer payment if the offeror's financial agent is not directly on-line to the Fedwire and, therefore, not the receiver of the wire transfer payment.

(End of provision)

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
Mrs. Linda M. Toth, Chief, Contracts Branch, U.S. Army Corps of Engineers, Philadelphia District, Wanamaker Building, 100 Penn Square East, Room 643, Philadelphia, PA 19107-3390.

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

(End of provision)

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.

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Section 00600 - Representations & Certifications

52.203-2	Certificate Of Independent Price Determination	APR 1985
52.203-11	Certification And Disclosure Regarding Payments To Influence Certain Federal Transactions	APR 1991
52.204-3	Taxpayer Identification	OCT 1998
52.204-5	Women-Owned Business (Other Than Small Business)	MAY 1999
52.209-5	Certification Regarding Debarment, Suspension, Proposed Debarment, And Other Responsibility Matters	DEC 2001
52.219-1 Alt I	Small Business Program Representations (Apr 2002) Alternate I	APR 2002
52.219-2	Equal Low Bids	OCT 1995
52.219-4	Notice of Price Evaluation Preference for HUBZone Small Business Concerns	JAN 1999
52.219-19	Small Business Concerns Representation For The Small Business Competitiveness Demonstration Program	OCT 2000
52.222-21	Prohibition Of Segregated Facilities	FEB 1999
52.222-22	Previous Contracts And Compliance Reports	FEB 1999
52.222-38	Compliance With Veterans' Employment Reporting Requirements	DEC 2001
52.223-13	Certification of Toxic Chemical Release Reporting	AUG 2003
252.247-7022	Representation Of Extent Of Transportation Of Supplies By Sea	AUG 1992

Section 00605

Small, Service-Disabled Veteran-Owned Small, Hubzone Small, Small Disadvantaged and Women-Owned Subcontracting Plan

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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 contrary to subparagraphs (a)(1) through (a)(3) of this provision; or

(2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provison _____ (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) of this provision.

(c) If the offeror deletes or modifies subparagraph (a)(2) of this provision, 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)

52.204-5 WOMEN-OWNED BUSINESS (OTHER THAN SMALL BUSINESS) (MAY 1999)

(a) Definition. Women-owned business concern, as used in this provision, means a concern that is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of its stock is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

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

(End of provision)

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

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

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

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

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

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

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

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

This Certification Concerns a Matter Within the Jurisdiction of an Agency of the United States and the Making of a False, Fictitious, or Fraudulent Certification May Render the Maker Subject to Prosecution Under Section 1001, Title 18, United States Code.

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

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

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

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

(End of provision)

52.219-1 SMALL BUSINESS PROGRAM REPRESENTATIONS (APR 2002) - ALTERNATE I (APR 2002)

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

(2) The small business size standard is $17.0 million.

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

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

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

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

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

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

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

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

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

(7) (Complete if offeror represented itself as disadvantaged in paragraph (b)(2) of this provision.) The offeror shall check the category in which its ownership falls:

____ Black American.

____ Hispanic American.

____ Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians).

____ Asian-Pacific American (persons with origins from Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Japan, China, Taiwan, Laos, Cambodia (Kampuchea), Vietnam, Korea, The Philippines, U.S. Trust Territory of the Pacific Islands (Republic of Palau), Republic of the Marshall Islands, Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, Guam, Samoa, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or Nauru).

____ Subcontinent Asian (Asian-Indian) American (persons with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives Islands, or Nepal).

____ Individual/concern, other than one of the preceding.

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

Service-disabled veteran-owned small business concern--

(1) Means a small business concern--

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

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

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

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

Veteran-owned small business concern means a small business concern--

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

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

"Women-owned small business concern," means a small business concern --

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

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

(d) Notice.

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

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

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

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

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

(End of provision)

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.

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

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

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

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

(ii) Otherwise successful offers from small business concerns;

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

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

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

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

These individual preference amounts shall be added together to arrive at the total evaluated price for that offer.

(c) Waiver of evaluation preference. A HUBZone small business concern may elect to waive the evaluation preference, in which case the factor will be added to its offer for evaluation purposes. The agreements in paragraph (d) of this clause do not apply if the offeror has waived the evaluation preference.

___ Offeror elects to waive the evaluation preference.

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

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

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

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

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

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

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

(End of clause)

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

(a) Definition.

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

(b) [Complete only if 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)

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

The offeror represents that --

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

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

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

(End of provision)

52.222-38 COMPLIANCE WITH VETERANS' EMPLOYMENT REPORTING REQUIREMENTS (DEC 2001)

By submission of its offer, the offeror represents that, if it is subject to the reporting requirements of 38 U.S.C. 4212(d) (i.e., if it has any contract containing Federal Acquisition Regulation clause 52.222-37, Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans), it has submitted the most recent VETS-100 Report required by that clause.

(End of provision)

52.223-13 CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING (AUG 2003)

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

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

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

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

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

( ) (ii) The facility does not have 10 or more 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 the following Standard Industrial Classification (SIC) codes or their corresponding North American Industry Classification System sectors:

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

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

(C) Major group codes 20 through 39.

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

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

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

(End of clause)

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

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

(b) Representation. The Offeror represents that it:

____ (1) Does anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

____ (2) Does not anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

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

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SMALL, VETERAN-OWNED SMALL, SERVICE-DISABLED VETERAN-OWNED SMALL, HUBZONE SMALL, SMALL DISADVANTAGED AND WOMEN-OWNED SMALL BUSINESS SUBCONTRACTING PLAN

DATE:_____

CONTRACTOR: _____
ADDRESS: _____
SOLICITATION OR CONTRACT NUMBER: _____
ITEM/SERVICE: _____

The following, together with any attachments, is hereby submitted as a Subcontracting Plan to satisfy the applicable requirements of Public Law 95-507 as implemented by OFPP Policy Letter 80-2. NOTE: To assist you in preparing your subcontracting plan, the U.S. Army Corps of Engineers considers the following provisional goals reasonable and achievable for fiscal year 2004:

(a) Small Business: 57.2% of total planned subcontracting dollars

(b) Small Disadvantaged Businesses (SDB), including Historically Black Colleges and Universities or Minority Institutions: 10.0% of total planned subcontracting dollars*

(c) Women-owned small businesses (WOSB), 10.0% of total planned subcontracting dollars*

(d) Hubzone Small Business (HubSB), 3.0% of total planned subcontracting dollars *

(e) Service-Disabled Veteran-Owned 3.0% of total planned subcontracting dollars *

*small business concerns owned and controlled by.

1. (a) The following percentage goals (expressed in terms of a percentage of total planned subcontracting dollars) are applicable to the contract cited above or to the contract awarded under the solicitation cited.

(i) Small Business Concerns: _____% of total planned subcontracting dollars under this contract will go to subcontractors who are small business concerns.

(ii) Veteran-Owned Small Business Concerns: _____ % of total planned subcontracting dollars under this contract will go to subcontractors who are veteran-owned small business concerns.

(iii) Service-Disabled Veteran-Owned Small Business Concerns: _____% of total planned subcontracting dollars under this contract will go to subcontractors who are service-disabled veteran-owned small business concerns.

(iv) HUBZone Small Business Concerns: _____ % of total planned subcontracting dollars under this contract will go to subcontractors who are small business concerns located in a historically underutilized business zone which is an area located within one or more qualified census tracts, qualified nonmetropolitan counties, or lands within the external boundaries of an

Indian reservation and appear on the List of Qualified HUBZone Small Business Concerns maintained by the SBA. (http://www.sba.gov/hubzone/).

(v) Small Disadvantaged Business Concerns: _____% of total planned subcontracting dollars under this contract will go to subcontractors who are small concerns owned and controlled by socially and economically disadvantaged individuals. This percentage is included in the percentage shown under 1.(a)(i) above, as a subset.

(vi) Women-Owned Small Business Concerns: _____% of total planned subcontracting dollars under this contract will go to subcontractors who are women-owned small business concerns. This percentage is included in the percentage shown under 1.(a)(i) above, as a subset.

(b) The following dollar values correspond to the percentage goals shown in (a) above.

(i) Total dollars planned to be subcontracted to small business concerns:
$_____.

(ii) Total dollars planned to be subcontracted to veteran-owned small business concerns:
$_____.

(iii) Total dollars planned to be subcontracted to service-disabled veteran-owned small business concerns:
$_____.

(iv) Total dollars planned to be subcontracted to HUBZone small business concerns:
$_____.

(v) Total dollars planned to be subcontracted to small disadvantaged business concerns:
$_____. This dollar amount is included in the amount shown under 1.(b)(i) above, as a subset.

(vi) Total dollars planned to be subcontracted to women-owned small business concerns:
$_____. This dollar amount is included in the amount shown under 1.(b)(i) above, as a subset.

(c) The total estimated dollar value of all planned subcontracting (to all types of business concerns) under this contract is $_____.

(d) The following principal products and/or services will be subcontracted under this contract, and the distribution among small, veteran-owned small, service-disabled veteran-owned small, HUBZone small business, small disadvantaged, and women-owned small business concerns is as follows:

(Products/services planned to be subcontracted to small business concerns are identified by *, veteran-owned small business concerns by **, service-disabled veteran-owned small by ***, HUBZone small business concerns by ****, small disadvantaged business concerns by ***** and women-owned small business concerns by ******)

(Attachment may be used if additional space is required)

(e) The following method was used in developing subcontract goals (i.e., statement explaining how the product and service areas to be subcontracted were established, how the areas to be subcontracted to small, veteran-owned small, service-disabled veteran-owned small, HUBZone small, small disadvantaged, and women-owned small business concerns were determined, and how small, veteran-owned small, service-disabled veteran-owned small, HUBZone small, small disadvantaged, and women-owned small business concerns capabilities were determined, to include identification of source lists utilized in making those determination).

(f) Indirect and over head costs [_____] have [_____] have not been included in the goals specified in 1(a) and 1(b).

(g) If "have" is checked, explain the method used in determining the proportionate share of indirect and overhead cost to be allocated as subcontracts to small business concerns, veteran-owned small, service-disabled veteran-owned small, service-disabled veteran-owned small, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns.

2. The following individual will administer the subcontracting program:

Name: _____
Address & Telephone: _____
Telephone: _____

This individual's specific duties, as they relate to the firm's subcontracting program are as follows:

General overall responsibility for this company's Small Business Program, the development, preparation and execution of individual subcontracting plans and for monitoring performance relative to contractual subcontracting requirements contained in this plan, including but not limited to:

(a) Developing and maintaining bidders lists of small, veteran-owned small, service-disabled veteran-owned small, HUBZone small, small disadvantaged, and women-owned small business concerns from all possible sources.

(b) Ensuring that procurement packages are structured to permit small, veteran-owned small, service-disabled veteran-owned small, HUBZone small, small disadvantaged, and women-owned business concerns to participate to the maximum extent possible.

(c) Assuring inclusion of small, veteran-owned small, service-disabled veteran-owned small, HUBZone small, small disadvantaged, and women-owned business concerns in all solicitations for products or services which they are capable of providing.

(d) Reviewing solicitations to remove statements, clauses, etc., which may tend to restrict or prohibit small, veteran-owned small, service-disabled veteran-owned small, HUBZone small, small disadvantaged, and women-owned business participation.

(e) Ensuring periodic rotation of potential subcontractors on bidders lists.

(f) Ensuring that the bid proposal review board documents its reasons for rejecting low bids submitted by small, veteran-owned small, service-disabled veteran-owned small, HUBZone small, small disadvantaged, and women-owned business concerns.

(g) Ensuring the establishment and maintenance of records of solicitations and subcontract award activity.

(h) Attending or arranging for attendance of company counselors at Business Opportunity Workshops, Minority Business Enterprise Seminars, Trade Fairs, etc.

(i) Conducting or arranging for conduct of motivational training for purchasing personnel pursuant to the intent of P.O. 95-507.

(j) Monitoring attainment of proposed goals.

(k) Preparing and submitting periodic subcontracting reports required.

(l) Coordinating contractor's activities during the conduct of compliance reviews by Federal Agencies.

(m) Coordinating the conduct of contractor's activities involving its small, veteran-owned small, service-disabled veteran-owned small, HUBZone small, small disadvantaged, and women-owned business subcontracting program.

(n) Additions to (or deletions from) the duties specified above are as follows:

_____

_____

_____

3. The following efforts will be taken to assure that small, veteran-owned small, service-disabled veteran-owned small, HUBZone, small, small disadvantaged, and women-owned business concerns will have an equitable opportunity to compete for subcontracts:

(a) Outreach efforts will be made as follows:

(i) Contacts with minority and small business trade associations

(ii) Contacts with business development organizations

(iii) Attendance at small and minority business procurement conferences

(iv) Sources will be requested from SBA's PASS system.

(b) The following internal efforts will be made to guide and encourage buyers:

(i) Workshops, seminars and training programs will be conducted

(ii) Activities will be monitored to evaluate compliance with this subcontracting plan.

(c) Small, veteran-owned small, service-disabled veteran-owned small, HUBZone small, small disadvantaged, and women-owned business concern source lists, guides and other data identifying small, veteran-owned small, service-disabled veteran-owned small, HUBZone small, small disadvantaged, and women-owned business concerns will be maintained and utilized by buyers in soliciting subcontracts.

(d) Additions to (or deletions from) the above listed efforts are as follows:

4. The bidder (contractor) agrees that the clause entitled Utilization of Small, veteran-owned small, service-disabled veteran-owned small, HUBZone Small, Small Disadvantaged, and Women-Owned Small Business Concerns will be included in all subcontracts which offer further subcontracting opportunities, and all subcontractors except small business concerns who receive subcontracts in excess of $500,000 will be required to adopt and comply with a subcontracting plan similar to this one. Such plans will be reviewed by comparing them with the provisions of Public Law 95-507, and assuring that all minimum requirements of an acceptable subcontracting plan have been satisfied. The acceptability of percentage goals shall be determined on a case-by-case basis depending on the supplies/services involved, the availability of potential small,

veteran-owned small, service-disabled veteran-owned small, HUBZone small, small disadvantaged, and women-owned subcontractors, and prior experience. Once approved and implemented, plans will be monitored through the submission of periodic reports, and/or, as time and availability of funds permit, periodic visits to subcontractors facilities to review applicable records and subcontracting program progress.

5. The bidder (contractor) agrees to submit such periodic reports and cooperate in any studies or surveys as may be required by the contracting agency or the Small business Administration in order to determine the extent of compliance by the bidder with the subcontracting plan and with the clause entitled Utilization of Small, veteran-owned small, service-disabled veteran-owned small, HUBZone Small, Small Disadvantaged, and Women-Owned Small Business Concerns, contained in the contract.

6. The bidder (contractor) agrees that he will maintain at least the following types of records to document compliance with this subcontracting plan:

(a) Small, veteran-owned small, service-disabled veteran-owned small, HUBZone Small, Small Disadvantaged, and Women-Owned Business concern source lists, guides and other data identifying SB/HZSB/SDB/WO vendors.

(b) Organizations contacted for small, veteran-owned small, service-disabled veteran-owned small, HUBZone small, small disadvantaged, and women-owned business sources.

(c) On a contract-by-contract basis, records on all subcontract solicitations over $100,000, indicating on each solicitation (1) whether small business concerns were solicited, and if not, why not; (2) whether veteran-owned small business concerns were solicited, and if not, why not, (3) whether service-disabled veteran-owned small business concerns were solicited, and if not, why not; (4) whether HUBZone small business concerns were solicited, and if not, why not; (5) whether small disadvantaged business concerns were solicited, and if not, why not; (6) whether women-owned business concerns were solicited and if not, why not; and (7) reasons for the failure of solicited small, veteran-owned small, service-disabled veteran-owned small, HUBZone small, small disadvantaged, or women-owned business concerns to receive the subcontract award.

(d) Records to support other outreach efforts: Contacts with Minority and Small Business Trade Associations, etc. Attendance at small and minority business procurement conferences and trade fairs.

(e) Records to support internal activities to guide and encourage buyers: Workshops, seminars, training programs, etc. Monitoring activities to evaluate compliance.

(f) On a contract-by-contract basis, records to support subcontract award data to include name and address or subcontractor .

(g) Records to be maintained in addition to the above are as follows:

Signed: _____
Typed Name: _____
Title: _____
Date: _____

Plan Accepted By: _____
Contracting Officer

Date: _____

NOTE TO CONTRACTING OFFICER: Upon incorporation of a plan into the contract, indicate herein the estimated dollar value of the contract:

$ _____.

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52.202-1 Alt I	Definitions (Dec 2001) --Alternate I	MAY 2001
52.203-3	Gratuities	APR 1984
52.203-5	Covenant Against Contingent Fees	APR 1984
52.203-6	Restrictions On Subcontractor Sales To The Government	JUL 1995
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 2003
52.204-4	Printed or Copied Double-Sided on Recycled Paper	AUG 2000
52.204-7	Central Contractor Registration	OCT 2003
52.209-6	Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, or Proposed for Debarment	JUL 1995
52.211-13	Time Extensions	SEP 2000
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
52.217-7	Option For Increased Quantity-Separately Priced Line Item	MAR 1989
52.219-4	Notice of Price Evaluation Preference for HUBZone Small Business Concerns	JAN 1999
52.219-8	Utilization of Small Business Concerns	OCT 2000
52.219-9 Alt I	Small Business Subcontracting Plan (Jan 2002) Alternate I	OCT 2001
52.219-16	Liquidated Damages-Subcontracting Plan	JAN 1999
52.222-1	Notice To The Government Of Labor Disputes	FEB 1997
52.222-3	Convict Labor	JUN 2003
52.222-4	Contract Work Hours and Safety Standards Act - Overtime Compensation	SEP 2000
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
52.222-21	Prohibition Of Segregated Facilities	FEB 1999
52.222-26	Equal Opportunity	APR 2002
52.222-27	Affirmative Action Compliance Requirements for Construction	FEB 1999
52.222-35	Equal Opportunity For Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans	DEC 2001
52.222-36	Affirmative Action For Workers With Disabilities	JUN 1998
52.222-37	Employment Reports On Special Disabled Veterans, Veterans Of The Vietnam Era, and Other Eligible Veterans	DEC 2001

52.223-6	Drug-Free Workplace	MAY 2001
52.223-14	Toxic Chemical Release Reporting	AUG 2003
52.225-9	Buy American Act--Construction Materials	JUN 2003
52.225-10	Notice of Buy American Act Requirement--Construction Materials	MAY 2002
52.225-13	Restrictions on Certain Foreign Purchases	JAN 2004
52.226-1	Utilization Of Indian Organizations And Indian-Owned Economic Enterprises	JUN 2000
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
52.228-1	Bid Guarantee	SEP 1996
52.228-2	Additional Bond Security	OCT 1997
52.228-5	Insurance - Work On A Government Installation	JAN 1997
52.228-11	Pledges Of Assets	FEB 1992
52.228-12	Prospective Subcontractor Requests for Bonds	OCT 1995
52.228-14	Irrevocable Letter of Credit	DEC 1999
52.228-15	Performance and Payment Bonds--Construction	JUL 2000
52.229-3	Federal, State And Local Taxes	APR 2003
52.232-5	Payments under Fixed-Price Construction Contracts	SEP 2002
52.232-17	Interest	JUN 1996
52.232-23	Assignment Of Claims	JAN 1986
52.232-27	Prompt Payment for Construction Contracts	OCT 2003
52.232-34	Payment By Electronic Funds Transfer--Other Than Central Contractor Registration	MAY 1999
52.233-1	Disputes	JUL 2002
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
52.236-7	Permits and Responsibilities	NOV 1991
52.236-8	Other Contracts	APR 1984
52.236-9	Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements	APR 1984
52.236-10	Operations and Storage Areas	APR 1984
52.236-11	Use and Possession Prior to Completion	APR 1984
52.236-12	Cleaning Up	APR 1984
52.236-13	Accident Prevention	NOV 1991
52.236-15	Schedules for Construction Contracts	APR 1984
52.236-17	Layout of Work	APR 1984
52.236-21	Specifications and Drawings for Construction	FEB 1997
52.236-26	Preconstruction Conference	FEB 1995
52.242-13	Bankruptcy	JUL 1995
52.242-14	Suspension of Work	APR 1984
52.243-4	Changes	AUG 1987
52.244-2	Subcontracts	AUG 1998
52.246-12	Inspection of Construction	AUG 1996
52.246-21	Warranty of Construction	MAR 1994
52.248-3	Value Engineering-Construction	FEB 2000
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
52.249-5000	Basis for Settlement of Proposals	APR 2000
52.253-1	Computer Generated Forms	JAN 1991

252.201-7000	Contracting Officer's Representative	DEC 1991
252.203-7001	Prohibition On Persons Convicted of Fraud or Other Defense-Contract-Related Felonies	MAR 1999
252.203-7002	Display Of DOD Hotline Poster	DEC 1991
252.204-7000	Disclosure Of Information	DEC 1991
252.204-7003	Control Of Government Personnel Work Product	APR 1992
252.209-7000	Acquisition From Subcontractors Subject To On-Site Inspection Under The Intermediate Range Nuclear Forces (INF) Treaty	NOV 1995
252.209-7001	Disclosure of Ownership or Control by the Government of a Terrorist Country	MAR 1998
252.209-7004	Subcontracting With Firms That Are Owned or Controlled By The Government of a Terrorist Country	MAR 1998
252.219-7003	Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan (DOD Contracts)	APR 1996
252.223-7004	Drug Free Work Force	SEP 1988
252.225-7031	Secondary Arab Boycott Of Israel	APR 2003
252.227-7033	Rights in Shop Drawings	APR 1966
252.231-7000	Supplemental Cost Principles	DEC 1991
252.236-7000	Modification Proposals-Price Breakdown	DEC 1991
252.236-7002	Obstruction of Navigable Waterways	DEC 1991
252.236-7004	Payment for Mobilization and Demobilization	DEC 1991
252.243-7001	Pricing Of Contract Modifications	DEC 1991
252.243-7002	Requests for Equitable Adjustment	MAR 1998
252.247-7023	Transportation of Supplies by Sea	MAY 2002
252.247-7024	Notification Of Transportation Of Supplies By Sea	MAR 2000

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52.202-1 DEFINITIONS (MAY 2001) --ALTERNATE I (MAR 2001)

(a) Agency head or head of the agency means the Secretary (Attorney General, Administrator, Governor, Chairperson, or other chief official, as appropriate) of the agency, unless otherwise indicated, including any deputy or assistant chief official of the executive agency.

(b) Commercial component means any component that is a commercial item.

(c) Component means any item supplied to the Government as part of an end item or of another component, except that for use in 52.225-9, and 52.225-11 see the definitions in 52.225-9(a) and 52.225-11(a).

(d) Contracting Officer means a person with the authority to enter into, administer, and/or terminate contracts and make related determinations and findings. The term includes certain authorized representatives of the Contracting Officer acting within the limits of their authority as delegated by the Contracting Officer.

(e) Nondevelopmental item means--

(1) Any previously developed item of supply used exclusively for governmental purposes by a Federal agency, a State or local government, or a foreign government with which the United States has a mutual defense cooperation agreement;

(2) Any item described in paragraph (f)(1) of this definition that requires only minor modification or modifications of a type customarily available in the commercial marketplace in order to meet the requirements of the procuring department or agency; or

(3) Any item of supply being produced that does not meet the requirements of paragraph (f)(1) or (f)(2) solely because the item is not yet in use.

(f) "Contracting Officer" means a person with the authority to enter into, administer, and/or terminate contracts and make related determinations and findings. The term includes certain authorized representatives of the Contracting Officer acting within the limits of their authority as delegated by the Contracting Officer.

(g) Except as otherwise provided in this contract, the term "subcontracts" includes, but is not limited to, purchase orders and changes and modifications to purchase orders under this contract.

(End of clause)

52.203-3 GRATUITIES (APR 1984)

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

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

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

(b) The facts supporting this determination may be reviewed by any court having lawful jurisdiction.

(c) If this contract is terminated under paragraph (a) of this clause, the Government is entitled--

(1) To pursue the same remedies as in a breach of the contract; and

(2) In addition to any other damages provided by law, to exemplary damages of not less than 3 nor more than 10 times the cost incurred by the Contractor in giving gratuities to the person concerned, as determined by the agency head or a designee. (This subparagraph (c)(2) is applicable only if this contract uses money appropriated to the Department of Defense.)

(d) The rights and remedies of the Government provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.

(End of clause)

52.203-5 COVENANT AGAINST CONTINGENT FEES (APR 1984)

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

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

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

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

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

(End of clause)

52.203-6 RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT (JUL 1995)

(a) Except as provided in (b) of this clause, the Contractor shall not enter into any agreement with an actual or prospective subcontractor, nor otherwise act in any manner, which has or may have the effect of restricting sales by such subcontractors directly to the Government of any item or process (including computer software) made or furnished by the subcontractor under this contract or under any follow-on production contract.

(b) The prohibition in (a) of this clause does not preclude the Contractor from asserting rights that are otherwise authorized by law or regulation.

(c) The Contractor agrees to incorporate the substance of this clause, including this paragraph (c), in all subcontracts under this contract which exceed $100,000.

52.203-7 ANTI-KICKBACK PROCEDURES. (JUL 1995)

(a) Definitions.

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

"Person," as used in this clause, means a corporation, partnership, business association of any kind, trust, joint-stock company, or individual.

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

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

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

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

"Subcontractor," as used in this clause, (1) means any person, other than the prime Contractor, who offers to furnish or furnishes any supplies, materials, equipment, or services of any kind under a prime contract or a subcontract entered into in connection with such prime contract, and (2) includes any person who offers to furnish or furnishes general supplies to the prime Contractor or a higher tier subcontractor.

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

(b) The Anti-Kickback Act of 1986 (41 U.S.C. 51-58) (the Act), prohibits any person from -

(1) Providing or attempting to provide or offering to provide any kickback;

(2) Soliciting, accepting, or attempting to accept any kickback; or

(3) Including, directly or indirectly, the amount of any kickback in the contract price charged by a prime Contractor to the United States or in the contract price charged by a subcontractor to a prime Contractor or higher tier subcontractor.

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

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

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

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

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

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

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

(1) Cancel the solicitation, if the contract has not yet been awarded or issued; or

(2) Rescind the contract with respect to which--

(i) The Contractor or someone acting for the Contractor has been convicted for an offense where the conduct constitutes a violation of subsection 27(a) or (b) of the Act for the purpose of either--

(A) Exchanging the information covered by such subsections for anything of value; or

(B) Obtaining or giving anyone a competitive advantage in the award of a Federal agency procurement contract; or

(ii) The head of the contracting activity has determined, based upon a preponderance of the evidence, that the Contractor or someone acting for the Contractor has engaged in conduct constituting an offense punishable under subsections 27(e)(1) of the Act.

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

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

(End of clause)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(End of clause)

52.203-12 LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (JUN 2003)

(a) Definitions.

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

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

(1) The awarding of any Federal contract.

(2) The making of any Federal grant.

(3) The making of any Federal loan.

(4) The entering into of any cooperative agreement.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(b) Prohibitions.

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

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

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

(i) Agency and legislative liaison by own employees.

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

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

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

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

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

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

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

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

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

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

(ii) Professional and technical services.

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

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

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

(B) For purposes of subdivision (b)(3)(ii)(A) of this clause, "professional and technical services" shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

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

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

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

(c) Disclosure.

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

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

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

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

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

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

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

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

(e) Penalties.

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

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

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

(End of clause)

52.204-4 PRINTED OR COPIED DOUBLE-SIDED ON RECYCLED PAPER (AUG 2000)

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

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

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

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

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

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

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

(1) Postconsumer fiber; and

(2) Manufacturing wastes such as--

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

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

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

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

(End of clause)

52.204-7 CENTRAL CONTRACTOR REGISTRATION (OCT 2003)

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

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

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

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

Registered in the CCR database means that--

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

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

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

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

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

(1) An offeror may obtain a DUNS number--

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

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

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

(i) Company legal business.

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

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

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

(v) Company Telephone Number.

(vi) Date the company was started.

(vii) Number of employees at your location.

(viii) Chief executive officer/key manager.

(ix) Line of business (industry).

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

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

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

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

(g)(1)(i) If a Contractor has legally changed its business name, “doing business as” name, or division name (whichever is shown on the contract), or has transferred the assets used in performing the contract, but has not completed the necessary requirements regarding novation and change-of-name agreements in Subpart 42.12, the Contractor shall provide the responsible Contracting Officer a minimum of one business day's written notification of its intention to (A) change the name in the CCR database; (B) comply with the requirements of Subpart 42.12 of the FAR; and (C) agree in writing to the timeline and procedures specified by the responsible Contracting Officer. The Contractor must provide with the notification sufficient documentation to support the legally changed name.

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

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

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

(End of clause)

52.209-6 PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (JUL 1995)

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

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

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

(1) The name of the subcontractor.

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

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

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

(End of clause)

52.211-13 TIME EXTENSIONS (SEP 2000)

Time extensions for contract changes will depend upon the extent, if any, by which the changes cause delay in the completion of the various elements of construction. The change order granting the time extension may provide that the contract completion date will be extended only for those specific elements related to the changed work and that the remaining contract completion dates for all other portions of the work will not be altered. The change order also may provide an equitable readjustment of liquidated damages under the new completion schedule.

(End of clause)

52.211-18 VARIATION IN ESTIMATED QUANTITY (APR 1984)

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

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

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

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

(1) The proposal for the modification;

(2) The discussions conducted on the proposal(s), including those related to negotiating;

(3) Pricing of the modification; or

(4) Performance of the modification.

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

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

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

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

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

(End of clause)

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

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

(1) Based on adequate price competition;

(2) Based on established catalog or market prices of commercial items sold in substantial quantities to the general public; or

(3) Set by law or regulation.

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

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

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

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

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

(1) the actual subcontract; or

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

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

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

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

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

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

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

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

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

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

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

(ii) An offset shall not be allowed if:

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

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

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

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

(End of clause)

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

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

(1) become operative only for any modification to this contract involving aggregate increases and/or decreases in costs, plus applicable profits, expected to exceed the threshold for submission of cost or pricing data at (FAR) 48 CFR 15.403-4(a)(1); and

(2) be limited to such modifications.

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

(1) Based on adequate price competition;

(2) Based on established catalog or market prices of commercial items sold in substantial quantities to the general public; or

(3) Set by law or regulation.

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

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

(End of clause)

52.217-7 OPTION FOR INCREASED QUANTITY--SEPARATELY PRICED LINE ITEM (MAR 1989)

The Government may require the delivery of the numbered line item, identified in the Schedule as an option item, in the quantity and at the price stated in the Schedule. The Contracting Officer may exercise the option by written notice to the Contractor within - See Section 00800, Clause SC-1. Delivery of added items shall continue at the same rate that like items are called for under the contract, unless the parties otherwise agree.

(End of clause)

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

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

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

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

(ii) Otherwise successful offers from small business concerns;

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

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

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

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

These individual preference amounts shall be added together to arrive at the total evaluated price for that offer.

(c) Waiver of evaluation preference. A HUBZone small business concern may elect to waive the evaluation preference, in which case the factor will be added to its offer for evaluation purposes. The agreements in paragraph (d) of this clause do not apply if the offeror has waived the evaluation preference.

___ Offeror elects to waive the evaluation preference.

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

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

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

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

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

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

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

(End of clause)

52.219-8 UTILIZATION OF SMALL BUSINESS CONCERNS (OCT 2000)

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

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

Definitions. As used in this contract--

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

Service-disabled veteran-owned small business concern--

(1) Means a small business concern--

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

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

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

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

Small disadvantaged business concern means a small business concern that represents, as part of its offer that--

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

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

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

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

Veteran-owned small business concern means a small business concern--

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

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

Women-owned small business concern means a small business concern--

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

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

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

(End of clause)

52.219-9 SMALL BUSINESS SUBCONTRACTING PLAN (JAN 2002)--ALTERNATE I (OCT 2001).

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

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

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

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

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

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

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

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

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

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

(2) A statement of--

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

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

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

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

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

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

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

(i) Small business concerns;

(ii) Veteran-owned small business concerns;

(iii) HUBZone small business concerns;

(iv) Small disadvantaged business concerns; and

(v) Women-owned small business concerns.

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

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

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

(i) Small business concerns;

(ii) Veteran-owned small business concerns;

(iii) HUBZone small business concerns;

(iv) Small disadvantaged business concerns; and

(v) Women-owned small business concerns.

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

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

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

(10) Assurances that the offeror will--

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

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

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

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

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

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

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

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

(A) Whether small business concerns were solicited and, if not, why not;

(B) Whether veteran-owned small business concerns were solicited and, if not, why not;

(C) Whether HUBZone small business concerns were solicited and, if not, why not;

(D) Whether small disadvantaged business concerns were solicited and, if not, why not;

(E) Whether women-owned small business concerns were solicited and, if not, why not; and

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

(iv) Records of any outreach efforts to contact--

(A) Trade associations;

(B) Business development organizations;

(C) Conferences and trade fairs to locate small, HUBZone small, small disadvantaged, and women-owned small business sources; and

(D) Veterans service organizations.

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

(A) Workshops, seminars, training, etc.; and

(B) Monitoring performance to evaluate compliance with the program's requirements.

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

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

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

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

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

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

(f) A master plan on a plant or division-wide basis that contains all the elements required by paragraph (d) of this clause, except goals, may be incorporated by reference as a part of the subcontracting plan required of the offeror by this clause; provided--
(1) the master plan has been approved, (2) the offeror ensures that the master plan is updated as necessary and provides copies of the approved master plan, including evidence of its approval, to the Contracting Officer, and (3)

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

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

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

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

(j) The Contractor shall submit the following reports:

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

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

(End of clause)

52.219-16 LIQUIDATED DAMAGES-SUBCONTRACTING PLAN (JAN 1999)

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

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

(c) Before the Contracting Officer makes a final decision that the Contractor has failed to make such good faith

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

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

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

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

(End of clause)

52.222-1 NOTICE TO THE GOVERNMENT OF LABOR DISPUTES (FEB 1997)

If the Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this contract, the Contractor shall immediately give notice, including all relevant information, to the Contracting Officer.

(End of clause)

52.222-3 CONVICT LABOR (JUN 2003)

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

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

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

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

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

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

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

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

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

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

(End of clause)

52.222-4 CONTRACT WORK HOURS AND SAFETY STANDARDS ACT - OVERTIME COMPENSATION. (SEP 2000)

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

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

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

(d) Payrolls and basic records.

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

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

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

(End of clause)

52.222-6 DAVIS-BACON ACT (FEB 1995)

(a) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll

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

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

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

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

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

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

(3) In the event the Contractor, the laborers or mechanics to be employed in the classification, or their representatives, and the Contracting Officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the Contracting Officer shall refer the questions, including the views of all interested parties and the recommendation of the Contracting Officer, to the Administrator of the Wage and Hour Division for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

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

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

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

(End of clause)

52.222-7 WITHHOLDING OF FUNDS (FEB 1988)

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

(End of clause)

52.222-8 PAYROLLS AND BASIC RECORDS (FEB 1988)

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

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

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or

subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify--

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

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

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

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

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

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

(End of clause)

52.222-9 APPRENTICES AND TRAINEES (FEB 1988)

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

benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

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

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

(End of clause)

52.222-10 COMPLIANCE WITH COPELAND ACT REQUIREMENTS (FEB 1988)

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

(End of clause)

52.222-11 SUBCONTRACTS (LABOR STANDARDS (FEB 1988)

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

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

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

(End of clause)

52.222-12 CONTRACT TERMINATION--DEBARMENT (FEB 1988)

A breach of the contract clauses entitled Davis-Bacon Act, Contract Work Hours and Safety Standards Act--Overtime Compensation, Apprentices and Trainees, Payrolls and Basic Records, Compliance with Copeland Act Requirements, Subcontracts (Labor Standards), Compliance with Davis-Bacon and Related Act Regulations, or Certification of Eligibility may be grounds for termination of the contract, and for debarment as a Contractor and subcontractor as provided in 29 CFR 5.12.

(End of clause)

52.222-13 COMPLIANCE WITH DAVIS-BACON AND RELATED ACT REGULATIONS (FEB 1988)

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are hereby incorporated by reference in this contract.

(End of clause)

52.222-14 DISPUTES CONCERNING LABOR STANDARDS (FEB 1988)

The United States Department of Labor has set forth in 29 CFR Parts 5, 6, and 7 procedures for resolving disputes concerning labor standards requirements. Such disputes shall be resolved in accordance with those procedures and not the Disputes clause of this contract. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(End of clause)

52.222-15 CERTIFICATION OF ELIGIBILITY (FEB 1988)

(a) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(b) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(d) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

(End of clause)

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)

52.222-26 EQUAL OPPORTUNITY (APR 2002)

(a) Definition. United States, as used in this clause, means the 50 States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, and Wake Island.

(b) If, during any 12-month period (including the 12 months preceding the award of this contract), the Contractor has been or is awarded nonexempt Federal contracts and/or subcontracts that have an aggregate value in excess of $10,000, the Contractor shall comply with paragraphs (b)(1) through (b)(11) of this clause, except for work performed outside the United States by employees who were not recruited within the United States. Upon request, the Contractor shall provide information necessary to determine the applicability of this clause.

(1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. However, it shall not be a violation of this clause for the Contractor to extend a publicly announced preference in employment to Indians living on or near an Indian reservation, in connection with employment opportunities on or near an Indian reservation, as permitted by 41 CFR 60-1.5.

(2) The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. This shall include, but not be limited to, (i) employment, (ii) upgrading, (iii) demotion, (iv) transfer, (v) recruitment or recruitment advertising, (vi) layoff or termination, (vii) rates of pay or other forms of compensation, and (viii) selection for training, including apprenticeship.

(3) The Contractor shall post in conspicuous places available to employees and applicants for employment the notices to be provided by the Contracting Officer that explain this clause.

(4) The Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(5) The Contractor shall send, to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, the notice to be provided by the Contracting Officer advising the labor union or workers' representative of the Contractor's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.

(6) The Contractor shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.

(7) The Contractor shall furnish to the contracting agency all information required by Executive Order 11246, as amended, and by the rules, regulations, and orders of the Secretary of Labor. The Contractor shall also file Standard Form 100 (EEO-1), or any successor form, as prescribed in 41 CFR part 60-1. Unless the Contractor has filed within the 12 months preceding the date of contract award, the Contractor shall, within 30 days after contract award, apply to either the regional Office of Federal Contract Compliance Programs (OFCCP) or the local office of the Equal Employment Opportunity Commission for the necessary forms.

(8) The Contractor shall permit access to its premises, during normal business hours, by the contracting agency or the OFCCP for the purpose of conducting on-site compliance evaluations and complaint investigations. The Contractor shall permit the Government to inspect and copy any books, accounts, records (including computerized records), and other material that may be relevant to the matter under investigation and pertinent to compliance with Executive Order 11246, as amended, and rules and regulations that implement the Executive Order.

(9) If the OFCCP determines that the Contractor is not in compliance with this clause or any rule, regulation, or order of the Secretary of Labor, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order 11246, as amended. In addition, sanctions may be imposed and remedies invoked against the Contractor as provided in Executive Order 11246, as amended; in the rules, regulations, and orders of the Secretary of Labor; or as otherwise provided by law.

(10) The Contractor shall include the terms and conditions of subparagraphs (b)(1) through (11) of this clause in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

(11) The Contractor shall take such action with respect to any subcontract or purchase order as the contracting officer may direct as a means of enforcing these terms and conditions, including sanctions for noncompliance; provided, that if the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

(c) Notwithstanding any other clause in this contract, disputes relative to this clause will be governed by the procedures in 41 CFR 60-1.1.

(End of clause)

52.222-27 AFFIRMATIVE ACTION COMPLIANCE REQUIREMENTS FOR CONSTRUCTION (FEB 1999)

(a) Definitions. "Covered area," as used in this clause, means the geographical area described in the solicitation for this contract.

"Deputy Assistant Secretary," as used in this clause, means Deputy Assistant Secretary for Federal Contract Compliance, U.S. Department of Labor, or a designee.

"Employer's identification number," as used in this clause, means the Federal Social Security number used on the employer's quarterly federal tax return, U.S. Treasury Department Form 941.

"Minority," as used in this clause, means--

(1) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

(2) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands);

(3) Black (all persons having origins in any of the black African racial groups not of Hispanic origin); and

(4) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race).

(b) If the Contractor, or a subcontractor at any tier, subcontracts a portion of the work involving any construction trade, each such subcontract in excess of $10,000 shall include this clause and the Notice containing the goals for minority and female participation stated in the solicitation for this contract.

(c) If the Contractor is participating in a Hometown Plan (41 CFR 60-4) approved by the U.S. Department of Labor in a covered area, either individually or through an association, its affirmative action obligations on all work in the plan area (including goals) shall comply with the plan for those trades that have unions participating in the plan. Contractors must be able to demonstrate participation in, and compliance with, the provisions of the plan. Each Contractor or subcontractor participating in an approved plan is also required to comply with its obligations under the Equal Opportunity clause, and to make a good faith effort to achieve each goal under the plan in each trade in which it has employees. The overall good-faith performance by other Contractors or subcontractors toward a goal in an approved plan does not excuse any Contractor's or subcontractor's failure to make good-faith efforts to achieve the plan's goals.

(d) The Contractor shall implement the affirmative action procedures in subparagraphs (g)(1) through (16) of this clause. The goals stated in the solicitation for this contract are expressed as percentages of the total hours of employment and training of minority and female utilization that the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for the geographical area where that work is actually performed. The Contractor is expected to make substantially uniform progress toward its goals in each craft.

(e) Neither the terms and conditions of any collective bargaining agreement, nor the failure by a union with which the Contractor has a collective bargaining agreement, to refer minorities or women shall excuse the Contractor's obligations under this clause, Executive Order 11246, as amended, or the regulations thereunder.

(f) In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

(g) The Contractor shall take affirmative action to ensure equal employment opportunity. The evaluation of the Contractor's compliance with this clause shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully and implement affirmative action steps at least as extensive as the following:

(1) Ensure a working environment free of harassment, intimidation, and coercion at all sites and in all facilities where the Contractor's employees are assigned to work. The Contractor, if possible, will assign two or more women

to each construction project. The Contractor shall ensure that foremen, superintendents, and other onsite supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at these sites or facilities.

(2) Establish and maintain a current list of sources for minority and female recruitment. Provide written notification to minority and female recruitment sources and community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

(3) Establish and maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant, referrals of minorities or females from unions, recruitment sources, or community organizations, and the action taken with respect to each individual. If an individual was sent to the union hiring hall for referral and not referred back to the Contractor by the union or, if referred back, not employed by the Contractor, this shall be documented in the file, along with whatever additional actions the Contractor may have taken.

(4) Immediately notify the Deputy Assistant Secretary when the union or unions with which the Contractor has a collective bargaining agreement has not referred back to the Contractor a minority or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

(5) Develop on-the-job training opportunities and/or participate in training programs for the area that expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under subparagraph (g)(2) of this clause.

(6) Disseminate the Contractor's equal employment policy by--

(i) Providing notice of the policy to unions and to training, recruitment, and outreach programs, and requesting their cooperation in assisting the Contractor in meeting its contract obligations;

(ii) Including the policy in any policy manual and in collective bargaining agreements;

(iii) Publicizing the policy in the company newspaper, annual report, etc.;

(iv) Reviewing the policy with all management personnel and with all minority and female employees at least once a year; and

(v) Posting the policy on bulletin boards accessible to employees at each location where construction work is performed.

(7) Review, at least annually, the Contractor's equal employment policy and affirmative action obligations with all employees having responsibility for hiring, assignment, layoff, termination, or other employment decisions. Conduct review of this policy with all on-site supervisory personnel before initiating construction work at a job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

(8) Disseminate the Contractor's equal employment policy externally by including it in any advertising in the news media, specifically including minority and female news media. Provide written notification to, and discuss this policy with, other Contractors and subcontractors with which the Contractor does or anticipates doing business.

(9) Direct recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students, and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than 1 month before the date for acceptance of applications for apprenticeship or training by any recruitment source, send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

(10) Encourage present minority and female employees to recruit minority persons and women. Where reasonable, provide after-school, summer, and vacation employment to minority and female youth both on the site and in other areas of the Contractor's workforce.

(11) Validate all tests and other selection requirements where required under 41 CFR 60-3.

(12) Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities. Encourage these employees to seek or to prepare for, through appropriate training, etc., opportunities for promotion.

(13) Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment-related activities to ensure that the Contractor's obligations under this contract are being carried out.

(14) Ensure that all facilities and company activities are nonsegregated except that separate or single-user rest rooms and necessary dressing or sleeping areas shall be provided to assure privacy between the sexes.

(15) Maintain a record of solicitations for subcontracts for minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

(16) Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's equal employment policy and affirmative action obligations.

(h) The Contractor is encouraged to participate in voluntary associations that may assist in fulfilling one or more of the affirmative action obligations contained in subparagraphs (g)(1) through (16) of this clause. The efforts of a contractor association, joint contractor-union, contractor-community, or similar group of which the contractor is a member and participant may be asserted as fulfilling one or more of its obligations under subparagraphs (g)(1) through (16) of this clause, provided the Contractor--

(1) Actively participates in the group;

(2) Makes every effort to ensure that the group has a positive impact on the employment of minorities and women in the industry;

(3) Ensures that concrete benefits of the program are reflected in the Contractor's minority and female workforce participation;

(4) Makes a good-faith effort to meet its individual goals and timetables; and

(5) Can provide access to documentation that demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply is the Contractor's, and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

(i) A single goal for minorities and a separate single goal for women shall be established. The Contractor is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and nonminority. Consequently, the Contractor may be in violation of Executive Order 11246, as amended, if a particular group is employed in a substantially disparate manner.

(j) The Contractor shall not use goals or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

(k) The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts under Executive Order 11246, as amended.

(l) The Contractor shall carry out such sanctions and penalties for violation of this clause and of the Equal Opportunity clause, including suspension, termination, and cancellation of existing subcontracts, as may be imposed or ordered under Executive Order 11246, as amended, and its implementing regulations, by the OFCCP. Any failure to carry out these sanctions and penalties as ordered shall be a violation of this clause and Executive Order 11246, as amended.

(m) The Contractor in fulfilling its obligations under this clause shall implement affirmative action procedures at least as extensive as those prescribed in paragraph (g) of this clause, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of Executive Order 11246, as amended, the implementing regulations, or this clause, the Deputy Assistant Secretary shall take action as prescribed in 41 CFR 60-4.8.

(n) The Contractor shall designate a responsible official to--

(1) Monitor all employment-related activity to ensure that the Contractor's equal employment policy is being carried out;

(2) Submit reports as may be required by the Government; and

(3) Keep records that shall at least include for each employee the name, address, telephone number, construction trade, union affiliation (if any), employee identification number, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, separate records are not required to be maintained.

Nothing contained herein shall be construed as a limitation upon the application of other laws that establish different standards of compliance or upon the requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

(End of clause)

52.222-35 EQUAL OPPORTUNITY FOR SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS (DEC 2001)

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

All employment openings means all positions except executive and top management, those positions that will be filled from within the Contractor's organization, and positions lasting 3 days or less. This term includes full-time employment, temporary employment of more than 3 days duration, and part-time employment.

Executive and top management means any employee--

(1) Whose primary duty consists of the management of the enterprise in which the individual is employed or of a customarily recognized department or subdivision thereof;

(2) Who customarily and regularly directs the work of two or more other employees;

(3) Who has the authority to hire or fire other employees or whose suggestions and recommendations as to the hiring or firing and as to the advancement and promotion or any other change of status of other employees will be given particular weight;

(4) Who customarily and regularly exercises discretionary powers; and

(5) Who does not devote more than 20 percent or, in the case of an employee of a retail or service establishment, who does not devote more than 40 percent of total hours of work in the work week to activities that are not directly and closely related to the performance of the work described in paragraphs (1) through (4) of this definition. This paragraph (5) does not apply in the case of an employee who is in sole charge of an establishment or a physically separated branch establishment, or who owns at least a 20 percent interest in the enterprise in which the individual is employed.

Other eligible veteran means any other veteran who served on active duty during a war or in a campaign or expedition for which a campaign badge has been authorized.

Positions that will be filled from within the Contractor's organization means employment openings for which the Contractor will give no consideration to persons outside the Contractor's organization (including any affiliates, subsidiaries, and parent companies) and includes any openings the Contractor proposes to fill from regularly established “recall” lists. The exception does not apply to a particular opening once an employer decides to consider applicants outside of its organization.

Qualified special disabled veteran means a special disabled veteran who satisfies the requisite skill, experience, education, and other job-related requirements of the employment position such veteran holds or desires, and who, with or without reasonable accommodation, can perform the essential functions of such position.

Special disabled veteran means--

(1) A veteran who is entitled to compensation (or who but for the receipt of military retired pay would be entitled to compensation) under laws administered by the Department of Veterans Affairs for a disability--

(i) Rated at 30 percent or more; or

(ii) Rated at 10 or 20 percent in the case of a veteran who has been determined under 38 U.S.C. 3106 to have a serious employment handicap (i.e., a significant impairment of the veteran's ability to prepare for, obtain, or retain employment consistent with the veteran's abilities, aptitudes, and interests); or

(2) A person who was discharged or released from active duty because of a service-connected disability.

Veteran of the Vietnam era means a person who--

(1) Served on active duty for a period of more than 180 days and was discharged or released from active duty with other than a dishonorable discharge, if any part of such active duty occurred--

(i) In the Republic of Vietnam between February 28, 1961, and May 7, 1975; or

(ii) Between August 5, 1964, and May 7, 1975, in all other cases; or

(2) Was discharged or released from active duty for a service-connected disability if any part of the active duty was performed--

(i) In the Republic of Vietnam between February 28, 1961, and May 7, 1975; or

(ii) Between August 5, 1964, and May 7, 1975, in all other cases.
(b) General. (1) The Contractor shall not discriminate against the individual because the individual is a special disabled veteran, a veteran of the Vietnam era, or other eligible veteran, regarding any position for which the employee or applicant for employment is qualified. The Contractor shall take affirmative action to employ, advance in employment, and otherwise treat qualified special disabled veterans, veterans of the Vietnam era, and other

eligible veterans without discrimination based upon their disability or veterans' status in all employment practices such as--

(i) Recruitment, advertising, and job application procedures;

(ii) Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff and rehiring;

(iii) Rate of pay or any other form of compensation and changes in compensation;

(iv) Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;

(v) Leaves of absence, sick leave, or any other leave;

(vi) Fringe benefits available by virtue of employment, whether or not administered by the Contractor;

(vii) Selection and financial support for training, including apprenticeship, and on-the-job training under 38 U.S.C. 3687, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;

(viii) Activities sponsored by the Contractor including social or recreational programs; and

(ix) Any other term, condition, or privilege of employment.

(2) The Contractor shall comply with the rules, regulations, and relevant orders of the Secretary of Labor issued under the Vietnam Era Veterans' Readjustment Assistance Act of 1972 (the Act), as amended (38 U.S.C. 4211 and 4212).

(c) Listing openings. (1) The Contractor shall immediately list all employment openings that exist at the time of the execution of this contract and those which occur during the performance of this contract, including those not generated by this contract, and including those occurring at an establishment of the Contractor other than the one where the contract is being performed, but excluding those of independently operated corporate affiliates, at an appropriate local public employment service office of the State wherein the opening occurs. Listing employment openings with the U.S. Department of Labor's America's Job Bank shall satisfy the requirement to list jobs with the local employment service office.

(2) The Contractor shall make the listing of employment openings with the local employment service office at least concurrently with using any other recruitment source or effort and shall involve the normal obligations of placing a bona fide job order, including accepting referrals of veterans and nonveterans. This listing of employment openings does not require hiring any particular job applicant or hiring from any particular group of job applicants and is not intended to relieve the Contractor from any requirements of Executive orders or regulations concerning nondiscrimination in employment.

(3) Whenever the Contractor becomes contractually bound to the listing terms of this clause, it shall advise the State public employment agency in each State where it has establishments of the name and location of each hiring location in the State. As long as the Contractor is contractually bound to these terms and has so advised the State agency, it need not advise the State agency of subsequent contracts. The Contractor may advise the State agency when it is no longer bound by this contract clause.

(d) Applicability. This clause does not apply to the listing of employment openings that occur and are filled outside the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, American Samoa, Guam, the Virgin Islands of the United States, and Wake Island.

(e) Postings. (1) The Contractor shall post employment notices in conspicuous places that are available to employees and applicants for employment.

(2) The employment notices shall--

(i) State the rights of applicants and employees as well as the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified employees and applicants who are special disabled veterans, veterans of the Vietnam era, and other eligible veterans; and

(ii) Be in a form prescribed by the Deputy Assistant Secretary for Federal Contract Compliance Programs, Department of Labor (Deputy Assistant Secretary of Labor), and provided by or through the Contracting Officer.

(3) The Contractor shall ensure that applicants or employees who are special disabled veterans are informed of the contents of the notice (e.g., the Contractor may have the notice read to a visually disabled veteran, or may lower the posted notice so that it can be read by a person in a wheelchair).

(4) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement, or other contract understanding, that the Contractor is bound by the terms of the Act and is committed to take affirmative action to employ, and advance in employment, qualified special disabled veterans, veterans of the Vietnam era, and other eligible veterans.

(f) Noncompliance. If the Contractor does not comply with the requirements of this clause, the Government may take appropriate actions under the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

(g) Subcontracts. The Contractor shall insert the terms of this clause in all subcontracts or purchase orders of $25,000 or more unless exempted by rules, regulations, or orders of the Secretary of Labor. The Contractor shall act as specified by the Deputy Assistant Secretary of Labor to enforce the terms, including action for noncompliance.

(End of clause)

52.222-36 AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES (JUN 1998)

(a) General. (1) Regarding any position for which the employee or applicant for employment is qualified, the Contractor shall not discriminate against any employee or applicant because of physical or mental disability. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified individuals with disabilities without discrimination based upon their physical or mental disability in all employment practices such as--

(i) Recruitment, advertising, and job application procedures;

(ii) Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff, and rehiring;

(iii) Rates of pay or any other form of compensation and changes in compensation;

(iv) Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;

(v) Leaves of absence, sick leave, or any other leave;

(vi) Fringe benefits available by virtue of employment, whether or not administered by the Contractor;

(vii) Selection and financial support for training, including apprenticeships, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;

(viii) Activities sponsored by the Contractor, including social or recreational programs; and

(ix) Any other term, condition, or privilege of employment.

(2) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor (Secretary) issued under the Rehabilitation Act of 1973 (29 U.S.C. 793) (the Act), as amended.

(b) Postings. (1) The Contractor agrees to post employment notices stating--

(i) The Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified individuals with disabilities; and

(ii) The rights of applicants and employees.

(2) These notices shall be posted in conspicuous places that are available to employees and applicants for employment. The Contractor shall ensure that applicants and employees with disabilities are informed of the contents of the notice (e.g., the Contractor may have the notice read to a visually disabled individual, or may lower the posted notice so that it might be read by a person in a wheelchair). The notices shall be in a form prescribed by the Deputy Assistant Secretary for Federal Contract Compliance of the U.S. Department of Labor (Deputy Assistant Secretary) and shall be provided by or through the Contracting Officer.

(3) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of Section 503 of the Act and is committed to take affirmative action to employ, and advance in employment, qualified individuals with physical or mental disabilities.

(c) Noncompliance. If the Contractor does not comply with the requirements of this clause, appropriate actions may be taken under the rules, regulations, and relevant orders of the Secretary issued pursuant to the Act.

(d) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order in excess of $10,000 unless exempted by rules, regulations, or orders of the Secretary. The Contractor shall act as specified by the Deputy Assistant Secretary to enforce the terms, including action for noncompliance.

(End of clause)

52.222-37 EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS (DEC 2001)

(a) Unless the Contractor is a State or local government agency, the Contractor shall report at least annually, as required by the Secretary of Labor, on--

(1) The number of disabled veterans and the number of veterans of the Vietnam era in the workforce of the contractor by job category and hiring location; and

(2) The total number of new employees hired during the period covered by the report, and of that total, the number of disabled veterans, and the number of veterans of the Vietnam era.

(b) The above items shall be reported by completing the form entitled "Federal Contractor Veterans' Employment Report VETS-100."

(c) Reports shall be submitted no later than September 30 of each year beginning September 30, 1988.

(d) The employment activity report required by paragraph (a)(2) of this clause shall reflect total hires during the most recent 12-month period as of the ending date selected for the employment profile report required by paragraph (a)(1) of this clause. Contractors may select an ending date: (1) As of the end of any pay period during the period January through March 1st of the year the report is due, or (2) as of December 31, if the contractor has previous written approval from the Equal Employment Opportunity Commission to do so for purposes of submitting the Employer Information Report EEO-1 (Standard Form 100).

(e) The count of veterans reported according to paragraph (a) of this clause shall be based on voluntary disclosure. Each Contractor subject to the reporting requirements at 38 U.S.C. 4212 shall invite all disabled veterans and veterans of the Vietnam era who wish to benefit under the affirmative action program at 38 U.S.C. 4212 to identify themselves to the Contractor. The invitation shall state that the information is voluntarily provided; that the information will be kept confidential; that disclosure or refusal to provide the information will not subject the applicant or employee to any adverse treatment; and that the information will be used only in accordance with the regulations promulgated under 38 U.S.C. 4212.

(f) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order of $10,000 or more unless exempted by rules, regulations, or orders of the Secretary.

(End of clause)

52.223-6 DRUG-FREE WORKPLACE (MAY 2001)

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

"Controlled substance" means a controlled substance in schedules I through V of section 202 of the Controlled Substances Act (21 U.S.C. 812) and as further defined in regulation at 21 CFR 1308.11 - 1308.15.

"Conviction" means a finding of guilt (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to deter- mine violations of the Federal or State criminal drug statutes.

"Criminal drug statute" means a Federal or non-Federal criminal statute involving the manufacture, distribution, dispensing, possession, or use of any controlled substance.

"Drug-free workplace" means the site(s) for the performance of work done by the Contractor in connection with a specific contract at which employees of the Contractor are prohibited from engaging in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance.

"Employee" means an employee of a Contractor directly engaged in the performance of work under a Government contract. "Directly engaged" is defined to include all direct cost employees and any other Contractor employee who has other than a minimal impact or involvement in contract performance.

"Individual" means an offeror/contractor that has no more than one employee including the offeror/contractor.

(b) The Contractor, if other than an individual, shall-- within 30 days after award (unless a longer period is agreed to in writing for contracts of 30 days or more performance duration), or as soon as possible for contracts of less than 30 days performance duration--

(1) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition;

(2) Establish an ongoing drug-free awareness program to inform such employees about--

(i) The dangers of drug abuse in the workplace;

(ii) The Contractor's policy of maintaining a drug-free workplace;

(iii) Any available drug counseling, rehabilitation, and employee assistance programs; and

(iv) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;

(3) Provide all employees engaged in performance of the contract with a copy of the statement required by subparagraph (b)(1) of this clause;

(4) Notify such employees in writing in the statement required by subparagraph (b)(1) of this clause that, as a condition of continued employment on this contract, the employee will--

(i) Abide by the terms of the statement; and

(ii) Notify the employer in writing of the employee's conviction under a criminal drug statute for a violation occurring in the workplace no later than 5 days after such conviction.

(5) Notify the Contracting Officer in writing within 10 days after receiving notice under subdivision (b)(4)(ii) of this clause, from an employee or otherwise receiving actual notice of such conviction. The notice shall include the position title of the employee;

(6) Within 30 days after receiving notice under subdivision (b)(4)(ii) of this clause of a conviction, take one of the following actions with respect to any employee who is convicted of a drug abuse violation occurring in the workplace:

(i) Taking appropriate personnel action against such employee, up to and including termination; or

(ii) Require such employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency; and

(7) Make a good faith effort to maintain a drug-free workplace through implementation of subparagraphs (b)(1) though (b)(6) of this clause.

(c) The Contractor, if an individual, agrees by award of the contract or acceptance of a purchase order, not to engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance while performing this contract.

(d) In addition to other remedies available to the Government, the Contractor's failure to comply with the requirements of paragraph (b) or (c) of this clause may, pursuant to FAR 23.506, render the Contractor subject to suspension of contract payments, termination of the contract for default, and suspension or debarment.

(End of clause)

52.223-14 TOXIC CHEMICAL RELEASE REPORTING (AUG 2003)

(a) Unless otherwise exempt, the Contractor, as owner or operator of a facility used in the performance of this contract, shall file by July 1 for the prior calendar year an annual Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023(a) and (g)), and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C.

13106). The Contractor shall file, for each facility subject to the Form R filing and reporting requirements, the annual Form R throughout the life of the contract.

(b) A Contractor-owned or -operated facility used in the performance of this contract is exempt from the requirement to file an annual Form R if--

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

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

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

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

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

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

(iii) Major group codes 20 through 39.

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

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

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

(c) If the Contractor has certified to an exemption in accordance with one or more of the criteria in paragraph (b) of this clause, and after award of the contract circumstances change so that any of its owned or operated facilities used in the performance of this contract is no longer exempt--

(1) The Contractor shall notify the Contracting Officer; and

(2) The Contractor, as owner or operator of a facility used in the performance of this contract that is no longer exempt, shall (i) submit a Toxic Chemical Release Inventory Form (Form R) on or before July 1 for the prior calendar year during which the facility becomes eligible; and (ii) continue to file the annual Form R for the life of the contract for such facility.

(d) The Contracting Officer may terminate this contract or take other action as appropriate, if the Contractor fails to comply accurately and fully with the EPCRA and PPA toxic chemical release filing and reporting requirements.

(e) Except for acquisitions of commercial items, as defined in FAR Part 2, the Contractor shall--

(1) For competitive subcontracts expected to exceed $100,000 (including all options), include a solicitation provision substantially the same as the provision at FAR 52.223-13, Certification of Toxic Chemical Release Reporting; and

(2) Include in any resultant subcontract exceeding $100,000 (including all options), the substance of this clause, except this paragraph (e).

(End of clause)

52.225-9 BUY AMERICAN ACT—CONSTRUCTION MATERIALS (JUN 2003)

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

Component means an article, material, or supply incorporated directly into a construction material.

Construction material means an article, material, or supply brought to the construction site by the Contractor or a subcontractor for incorporation into the building or work. The term also includes an item brought to the site preassembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, that are discrete systems incorporated into a public building or work and that are produced as complete systems, are evaluated as a single and distinct construction material regardless of when or how the individual parts or components of those systems are delivered to the construction site. Materials purchased directly by the Government are supplies, not construction material.

Cost of components means--

(1) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the construction material (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or

(2) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the end product.

Domestic construction material means--

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

(2) A construction material manufactured in the United States, if the cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind for which nonavailability determinations have been made are treated as domestic.

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

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

(b) Domestic preference. (1) This clause implements the Buy American Act (41 U.S.C. 10a-10d) by providing a preference for domestic construction material. The Contractor shall use only domestic construction material in performing this contract, except as provided in paragraphs (b)(2) and (b)(3) of this clause.

(2) This requirement does not apply to the construction material or components listed by the Government as follows: none

(3) The Contracting Officer may add other foreign construction material to the list in paragraph (b)(2) of this clause if the Government determines that

(i) The cost of domestic construction material would be unreasonable. The cost of a particular domestic construction material subject to the requirements of the Buy American Act is unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent;

(ii) The application of the restriction of the Buy American Act to a particular construction material would be impracticable or inconsistent with the public interest; or

(iii) The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.

(c) Request for determination of inapplicability of the Buy American Act. (1)(i) Any Contractor request to use foreign construction material in accordance with paragraph (b)(3) of this clause shall include adequate information for Government evaluation of the request, including--

(A) A description of the foreign and domestic construction materials;

(B) Unit of measure;

(C) Quantity;

(D) Price;

(E) Time of delivery or availability;

(F) Location of the construction project;

(G) Name and address of the proposed supplier; and

(H) A detailed justification of the reason for use of foreign construction materials cited in accordance with paragraph (b)(3) of this clause.

(ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed price comparison table in the format in paragraph (d) of this clause.

(iii) The price of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate may be issued).

(iv) Any Contractor request for a determination submitted after contract award shall explain why the Contractor could not reasonably foresee the need for such determination and could not have requested the determination before contract award. If the Contractor does not submit a satisfactory explanation, the Contracting Officer need not make a determination.

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

(3) Unless the Government determines that an exception to the Buy American Act applies, use of foreign construction material is noncompliant with the Buy American Act.

(d) Data. To permit evaluation of requests under paragraph (c) of this clause based on unreasonable cost, the Contractor shall include the following information and any applicable supporting data based on the survey of suppliers:

Foreign and Domestic Construction Materials Price Comparison

Construction material description	Unit of measure	Quantity	Price (dollars) \1\

Item 1
Foreign construction material.... ....
Domestic construction material... ....
Item 2
Foreign construction material.... ....
Domestic construction material... ....

Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued).
List name, address, telephone number, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.
Include other applicable supporting information.

(End of clause)

52.225-10 NOTICE OF BUY AMERICAN ACT REQUIREMENT--CONSTRUCTION MATERIALS (MAY 2002)

(a) Definitions. Construction material, domestic construction material, and foreign construction material, as used in this provision, are defined in the clause of this solicitation entitled "Buy American Act --Construction Materials" (Federal Acquisition Regulation (FAR) clause 52.225-9).

(b) Requests for determinations of inapplicability. An offeror requesting a determination regarding the inapplicability of the Buy American Act should submit the request to the Contracting Officer in time to allow a determination before submission of offers. The offeror shall include the information and applicable supporting data required by paragraphs (c) and (d) of the clause at FAR 52.225-9 in the request. If an offeror has not requested a determination regarding the inapplicability of the Buy American Act before submitting its offer, or has not received a response to a previous request, the offeror shall include the information and supporting data in the offer.

(c) Evaluation of offers. (1) The Government will evaluate an offer requesting exception to the requirements of the Buy American Act, based on claimed unreasonable cost of domestic construction material, by adding to the offered price the appropriate percentage of the cost of such foreign construction material, as specified in paragraph (b)(3)(i) of the clause at FAR 52.225-9.

(2) If evaluation results in a tie between an offeror that requested the substitution of foreign construction material based on unreasonable cost and an offeror that did not request an exception, the Contracting Officer will award to the offeror that did not request an exception based on unreasonable cost.

(d) Alternate offers.

(1) When an offer includes foreign construction material not listed by the Government in this solicitation in paragraph (b)(2) of the clause at FAR 52.225-9, the offeror also may submit an alternate offer based on use of equivalent domestic construction material.

(2) If an alternate offer is submitted, the offeror shall submit a separate Standard Form 1442 for the alternate offer, and a separate price comparison table prepared in accordance with paragraphs (c) and (d) of the clause at FAR 52.225-9 for the offer that is based on the use of any foreign construction material for which the Government has not yet determined an exception applies.

(3) If the Government determines that a particular exception requested in accordance with paragraph (c) of the clause at FAR 52.225-9 does not apply, the Government will evaluate only those offers based on use of the

equivalent domestic construction material, and the offeror shall be required to furnish such domestic construction material. An offer based on use of the foreign construction material for which an exception was requested--

(i) Will be rejected as nonresponsive if this acquisition is conducted by sealed bidding; or

(ii) May be accepted if revised during negotiations.

(End of provision)

52.225-13 RESTRICTIONS ON CERTAIN FOREIGN PURCHASES (JAN 2004)

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

(b) Except as authorized by OFAC, most transactions involving Cuba, Iran, Libya, and Sudan are prohibited, as are most imports from North Korea, into the United States or its outlying areas. Lists of entities and individuals subject to economic sanctions are included in OFAC's List of Specially Designated Nationals and Blocked Persons at TerList1.html. More information about these restrictions, as well as updates, is available in the OFAC's regulations at 31 CFR chapter V and/or on OFAC's Web site at http://www.treas.gov/ofac.

(c) The Contractor shall insert this clause, including this paragraph (c), in all subcontracts.

(End of clause)

52.226-1 UTILIZATION OF INDIAN ORGANIZATIONS AND INDIAN-OWNED ECONOMIC ENTERPRISES (JUN 2000)

(a) Definitions. As used in this clause:

"Indian" means any person who is a member of any Indian tribe, band, group, pueblo or community that is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs (BIA) in accordance with 25 U.S.C. 1452(c) and any ``Native" as defined in the Alaska Native Claims Settlement Act (43 U.S.C. 1601).

"Indian organization" means the governing body of any Indian tribe or entity established or recognized by the governing body of an Indian tribe for the purposes of 25 U.S.C., chapter 17.

"Indian-owned economic enterprise" means any Indian-owned (as determined by the Secretary of the Interior) commercial, industrial, or business activity established or organized for the purpose of profit, provided that Indian ownership constitutea not less than 51 percent of the enterprise.

"Indian tribe" means any Indian tribe, band, group, pueblo or community, including native villages and native groups (including corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, that is recognized by the Federal Government as eligible for services from BIA in accordance with 25 U.S.C. 1542(c).

"Interested party" means a prime contractor or an actual or prospective offeror whose direct economic interest

would be affected by the award of a subcontract or by the failure to award a subcontract.

(b) The Contractor shall use its best efforts to give Indian organizations and Indian-owned economic enterprises (25 U.S.C. 1544) the maximum practicable opportunity to participate in the subcontracts it awards to the fullest extent consistent with efficient performance of its contract.

(1) The Contracting Officer and the Contractor, acting in good faith, may rely on the representation of an Indian organization or Indian-owned economic enterprise as to its eligibility, unless an interested party challenges its status or the Contracting Officer has independent reason to question that status. In the event of a challenge to the representation of a subcontractor, the Contracting Officer will refer the matter to the U.S. Department of the Interior, Bureau of Indian Affairs (BIA), Attn: Chief, Division of Contracting and Grants Administration, 1849 C Street, NW., MS 2626-MIB, Washington, DC 20240-4000.

The BIA will determine the eligibility and notify the Contracting Officer. No incentive payment will be made within 50 working days of subcontract award or while a challenge is pending. If a subcontractor is determined to be an ineligible participant, no incentive payment will be made under the Indian Incentive Program.

(2) The Contractor may request an adjustment under the Indian Incentive Program to the following:

(i) The estimated cost of a cost-type contract.

(ii) The target cost of a cost-plus-incentive-fee prime contract.

(iii) The target cost and ceiling price of a fixed-price incentive prime contract.

(iv) The price of a firm-fixed-price prime contract.

(3) The amount of the adjustment to the prime contract is 5 percent of the estimated cost, target cost, or firm-fixed-price included in the subcontract initially awarded to the Indian organization or Indian-owned economic enterprise.

(4) The Contractor has the burden of proving the amount claimed and must assert its request for an adjustment prior to completion of contract performance.

(c) The Contracting Officer, subject to the terms and conditions of the contract and the availability of funds, will authorize an incentive payment of 5 percent of the amount paid to the subcontractor. The Contracting Officer will seek funding in accordance with agency procedures.

(End of clause)

52.227-1 AUTHORIZATION AND CONSENT (JUL 1995)

(a) The Government authorizes and consents to all use and manufacture, in performing this contract or any subcontract at any tier, of any invention described in and covered by a United States patent (1) embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract or (2) used in machinery, tools, or methods whose use necessarily results from compliance by the Contractor or a subcontractor with (i) specifications or written provisions forming a part of this contract or (ii) specific written instructions given by the Contracting Officer directing the manner of performance. The entire liability to the Government for infringement of a patent of the United States shall be determined solely by the provisions of the indemnity clause, if any, included in this contract or any subcontract hereunder (including any lower-tier subcontract), and the Government assumes liability for all other infringement to the extent of the authorization and consent hereinabove granted.

(b) The Contractor agrees to include, and require inclusion of, this clause, suitably modified to identify the parties, in all subcontracts at any tier for supplies or services (including construction, architect-engineer services, and materials, supplies, models, samples, and design or testing services expected to exceed the simplified acquisition threshold (however, omission of this clause from any subcontract, including those at or below the simplified acquisition threshold, does not affect this authorization and consent.)

(End of clause)

52.227-2 NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (AUG 1996)

(a) The Contractor shall report to the Contracting Officer, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this contract of which the Contractor has knowledge.

(b) In the event of any claim or suit against the Government on account of any alleged patent or copyright infringement arising out of the performance of this contract or out of the use of any supplies furnished or work or services performed under this contract, the Contractor shall furnish to the Government, when requested by the Contracting Officer, all evidence and information in possession of the Contractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except where the Contractor has agreed to indemnify the Government.

(e) The Contractor agrees to include, and require inclusion of, this clause in all subcontracts at any tier for supplies or services (including construction and architect-engineer subcontracts and those for material, supplies, models, samples, or design or testing services) expected to exceed the simplified acquisition threshold at (FAR) 2.101.to exceed the dollar amount set forth in 13.000 of the Federal Acquisition Regulation (FAR).

(End of clause)

52.227-4 PATENT INDEMNITY--CONSTRUCTION CONTRACTS (APR 1984)

Except as otherwise provided, the Contractor agrees to indemnify the Government and its officers, agents, and employees against liability, including costs and expenses, for infringement upon any United States patent (except a patent issued upon an application that is now or may hereafter be withheld from issue pursuant to a Secrecy Order under 35 U.S.C. 181) arising out of performing this contract or out of the use or disposal by or for the account of the Government of supplies furnished or work performed under this contract.

(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 20% percent of the bid price or $3,000,000.00, whichever is less.-

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

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

(End of clause)

52.228-2 ADDITIONAL BOND SECURITY (OCT 1997)

The Contractor shall promptly furnish additional security required to protect the Government and persons supplying labor or materials under this contract if--

(a) Any surety upon any bond, or issuing financial institution for other security, furnished with this contract becomes unacceptable to the Government.

(b) Any surety fails to furnish reports on its financial condition as required by the Government;

(c) The contract price is increased so that the penal sum of any bond becomes inadequate in the opinion of the Contracting Officer; or

(d) An irrevocable letter of credit (ILC) used as security will expire before the end of the period of required security. If the Contractor does not furnish an acceptable extension or replacement ILC, or other acceptable substitute, at least 30 days before an ILC's scheduled expiration, the Contracting officer has the right to immediately draw on the ILC.

(End of clause)

52.228-5 INSURANCE--WORK ON A GOVERNMENT INSTALLATION (JAN 1997)

(a) The Contractor shall, at its own expense, provide and maintain during the entire performance of this contract, at least the kinds and minimum amounts of insurance required in the Schedule or elsewhere in the contract.

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

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

(End of clause)

52.228-11 PLEDGES OF ASSETS (FEB 1992)

(a) Offerors shall obtain from each person acting as an individual surety on a bid guarantee, a performance bond, or a payment bond--

(1) Pledge of assets; and

(2) Standard Form 28, Affidavit of Individual Surety.

(b) Pledges of assets from each person acting as an individual surety shall be in the form of--

(1) Evidence of an escrow account containing cash, certificates of deposit, commercial or Government securities, or other assets described in FAR 28.203-2 (except see 28.203-2(b)(2) with respect to Government securities held in book entry form) and/or;

(2) A recorded lien on real estate. The offeror will be required to provide--

(i) Evidence of title in the form of a certificate of title prepared by a title insurance company approved by the United States Department of Justice. This title evidence must show fee simple title vested in the surety along with any concurrent owners; whether any real estate taxes are due and payable; and any recorded encumbrances against the property, including the lien filed in favor of the Government as required by FAR 28.203-3(d);

(ii) Evidence of the amount due under any encumbrance shown in the evidence of title;

(iii) A copy of the current real estate tax assessment of the property or a current appraisal dated no earlier than 6 months prior to the date of the bond, prepared by a professional appraiser who certifies that the appraisal has been conducted in accordance with the generally accepted appraisal standards as reflected in the Uniform Standards of Professional Appraisal Practice, as promulgated by the Appraisal Foundation.

(End of clause)

52.228-12 PROSPECTIVE SUBCONTRACTOR REQUESTS FOR BONDS. (OCT 1995)

In accordance with Section 806(a)(3) of Pub. L. 102-190, as amended by Sections 2091 and 8105 of Pub. L. 103-355, upon the request of a prospective subcontractor or supplier offering to furnish labor or material for the performance of this contract for which a payment bond has been furnished to the Government pursuant to the Miller Act, the Contractor shall promptly provide a copy of such payment bond to the requester.

(End of clause)

52.228-14 IRREVOCABLE LETTER OF CREDIT (DEC 1999)

(a) “Irrevocable letter of credit” (ILC), as used in this clause, means a written commitment by a federally insured financial institution to pay all or part of a stated amount of money, until the expiration date of the letter, upon presentation by the Government (the beneficiary) of a written demand therefor. Neither the financial institution nor the offeror/Contractor can revoke or condition the letter of credit.

(b) If the offeror intends to use an ILC in lieu of a bid bond, or to secure other types of bonds such as performance

and payment bonds, the letter of credit and letter of confirmation formats in paragraphs (e) and (f) of this clause shall be used.

(c) The letter of credit shall be irrevocable, shall require presentation of no document other than a written demand and the ILC (including confirming letter, if any), shall be issued/confirmed by an acceptable federally insured financial institution as provided in paragraph (d) of this clause, and--

(1) If used as a bid guarantee, the ILC shall expire no earlier than 60 days after the close of the bid acceptance period;

(2) If used as an alternative to corporate or individual sureties as security for a performance or payment bond, the offeror/Contractor may submit an ILC with an initial expiration date estimated to cover the entire period for which financial security is required or may submit an ILC with an initial expiration date that is a minimum period of one year from the date of issuance. The ILC shall provide that, unless the issuer provides the beneficiary written notice of non-renewal at least 60 days in advance of the current expiration date, the ILC is automatically extended without amendment for one year from the expiration date, or any future expiration date, until the period of required coverage is completed and the Contracting Officer provides the financial institution with a written statement waiving the right to payment. The period of required coverage shall be:

(i) For contracts subject to the Miller Act, the later of--

(A) One year following the expected date of final payment;

(B) For performance bonds only, until completion of any warranty period; or

(C) For payment bonds only, until resolution of all claims filed against the payment bond during the one-year period following final payment.

(ii) For contracts not subject to the Miller Act, the later of--

(A) 90 days following final payment; or

(B) For performance bonds only, until completion of any warranty period.

(d) Only federally insured financial institutions rated investment grade or higher shall issue or confirm the ILC. The offeror/Contractor shall provide the Contracting Officer a credit rating that indicates the financial institution has the required rating(s) as of the date of issuance of the ILC. Unless the financial institution issuing the ILC had letter of credit business of less than $25 million in the past year, ILCs over $5 million must be confirmed by another acceptable financial institution that had letter of credit business of less than $25 million in the past year.

(e) The following format shall be used by the issuing financial institution to create an ILC:

_____

[Issuing Financial Institution's Letterhead or Name and Address]

Issue Date _____

IRREVOCABLE LETTER OF CREDIT NO. _____

Account party's name _____

Account party's address _____

For Solicitation No. _____(for reference only)

TO: [U.S. Government agency]

[U.S. Government agency's address]

1. We hereby establish this irrevocable and transferable Letter of Credit in your favor for one or more drawings up to United States $_____. This Letter of Credit is payable at [issuing financial institution's and, if any, confirming financial institution's] office at [issuing financial institution's address and, if any, confirming financial institution's address] and expires with our close of business on _____, or any automatically extended expiration date.

2. We hereby undertake to honor your or the transferee's sight draft(s) drawn on the issuing or, if any, the confirming financial institution, for all or any part of this credit if presented with this Letter of Credit and confirmation, if any, at the office specified in paragraph 1 of this Letter of Credit on or before the expiration date or any automatically extended expiration date.

3. [This paragraph is omitted if used as a bid guarantee, and subsequent paragraphs are renumbered.] It is a condition of this Letter of Credit that it is deemed to be automatically extended without amendment for one year from the expiration date hereof, or any future expiration date, unless at least 60 days prior to any expiration date, we notify you or the transferee by registered mail, or other receipted means of delivery, that we elect not to consider this Letter of Credit renewed for any such additional period. At the time we notify you, we also agree to notify the account party (and confirming financial institution, if any) by the same means of delivery.

4. This Letter of Credit is transferable. Transfers and assignments of proceeds are to be effected without charge to either the beneficiary or the transferee/assignee of proceeds. Such transfer or assignment shall be only at the written direction of the Government (the beneficiary) in a form satisfactory to the issuing financial institution and the confirming financial institution, if any.

5. This Letter of Credit is subject to the Uniform Customs and Practice (UCP) for Documentary Credits, 1993 Revision, International Chamber of Commerce Publication No. 500, and to the extent not inconsistent therewith, to the laws of _____ [state of confirming financial institution, if any, otherwise state of issuing financial institution].

6. If this credit expires during an interruption of business of this financial institution as described in Article 17 of the UCP, the financial institution specifically agrees to effect payment if this credit is drawn against within 30 days after the resumption of our business.

Sincerely,

_____

[Issuing financial institution]

(f) The following format shall be used by the financial institution to confirm an ILC:

_____
[Confirming Financial Institution's Letterhead or Name and Address]

(Date) _____

Our Letter of Credit Advice Number _____

Beneficiary: _____ [U.S. Government agency]

Issuing Financial Institution: _____

Issuing Financial Institution's LC No.: _____

Gentlemen:

1. We hereby confirm the above indicated Letter of Credit, the original of which is attached, issued by _____ [name of issuing financial institution] for drawings of up to United States dollars _____/U.S. $_____ and expiring with our close of business on _____ [the expiration date], or any automatically extended expiration date.

2. Draft(s) drawn under the Letter of Credit and this Confirmation are payable at our office located at _____.

3. We hereby undertake to honor sight draft(s) drawn under and presented with the Letter of Credit and this Confirmation at our offices as specified herein.

4. [This paragraph is omitted if used as a bid guarantee, and subsequent paragraphs are renumbered.] It is a condition of this confirmation that it be deemed automatically extended without amendment for one year from the expiration date hereof, or any automatically extended expiration date, unless:

(a) At least 60 days prior to any such expiration date, we shall notify the Contracting Officer, or the transferee and the issuing financial institution, by registered mail or other receipted means of delivery, that we elect not to consider this confirmation extended for any such additional period; or

(b) The issuing financial institution shall have exercised its right to notify you or the transferee, the account party, and ourselves, of its election not to extend the expiration date of the Letter of Credit.

5. This confirmation is subject to the Uniform Customs and Practice (UCP) for Documentary Credits, 1993 Revision, International Chamber of Commerce Publication No. 500, and to the extent not inconsistent therewith, to the laws of _____ [state of confirming financial institution].

6. If this confirmation expires during an interruption of business of this financial institution as described in Article 17 of the UCP, we specifically agree to effect payment if this credit is drawn against within 30 days after the resumption of our business.

Sincerely,

_____

[Confirming financial institution]

(g) The following format shall be used by the Contracting Officer for a sight draft to draw on the Letter of Credit:

SIGHT DRAFT

_____

[City, State]

(Date) _____

[Name and address of financial institution]

Pay to the order of _____ [Beneficiary Agency] _____ the sum of United States $_____.
This draft is drawn under Irrevocable Letter of Credit No. _____.

_____

[Beneficiary Agency]

By: _____

(End of clause)

52.228-15 PERFORMANCE AND PAYMENT BONDS--CONSTRUCTION (JUL 2000)-

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

Original contract price means the award price of the contract; or, for requirements contracts, the price payable for the estimated total quantity; or, for indefinite-quantity contracts, the price payable for the specified minimum quantity. Original contract price does not include the price of any options, except those options exercised at the time of contract award.

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

(1) Performance bonds (Standard Form 25). The penal amount of performance bonds at the time of contract award shall be 100 percent of the original contract price.

(2) Payment Bonds (Standard Form 25-A). The penal amount of payment bonds at the time of contract award shall be 100 percent of the original contract price.

(3) Additional bond protection. (i) The Government may require additional performance and payment bond protection if the contract price is increased. The increase in protection generally will equal 100 percent of the increase in contract price.

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

(c) Furnishing executed bonds. The Contractor shall furnish all executed bonds, including any necessary reinsurance agreements, to the Contracting Officer, within the time period specified in the Bid Guarantee provision of the solicitation, or otherwise specified by the Contracting Officer, but in any event, before starting work.

(d) Surety or other security for bonds. The bonds shall be in the form of firm commitment, supported by corporate sureties whose names appear on the list contained in Treasury Department Circular 570, individual sureties, or by other acceptable security such as postal money order, certified check, cashier's check, irrevocable letter of credit, or, in accordance with Treasury Department regulations, certain bonds or notes of the United States. Treasury Circular 570 is published in the Federal Register or may be obtained from the U.S. Department of Treasury, Financial Management Service, Surety Bond Branch, 401 14th Street, NW, 2nd Floor, West Wing, Washington, DC 20227.

(e) Notice of subcontractor waiver of protection (40 U.S.C. 270b(c). Any waiver of the right to sue on the payment bond is void unless it is in writing, signed by the person whose right is waived, and executed after such person has first furnished labor or material for use in the performance of the contract.

(End of clause)

52.229-3 FEDERAL, STATE, AND LOCAL TAXES (APR 2003)

(a) As used in this clause--

"Contract date" means the date set for bid opening or, if this is a negotiated contract or a modification, the effective date of this contract or modification.

"All applicable Federal, State, and local taxes and duties" means all taxes and duties, in effect on the contract date, that the taxing authority is imposing and collecting on the transactions or property covered by this contract.

"After-imposed Federal tax" means any new or increased Federal excise tax or duty, or tax that was exempted or excluded on the contract date but whose exemption was later revoked or reduced during the contract period, on the transactions or property covered by this contract that the Contractor is required to pay or bear as the result of legislative, judicial, or administrative action taking effect after the contract date. It does not include social security tax or other employment taxes.

"After-relieved Federal tax" means any amount of Federal excise tax or duty, except social security or other employment taxes, that would otherwise have been payable on the transactions or property covered by this contract, but which the Contractor is not required to pay or bear, or for which the Contractor obtains a refund or drawback, as the result of legislative, judicial, or administrative action taking effect after the contract date.

Local taxes includes taxes imposed by a possession or territory of the United States, Puerto Rico, or the Northern Mariana Islands, if the contract is performed wholly or partly in any of those areas.

(b) The contract price includes all applicable Federal, State, and local taxes and duties.

(c) The contract price shall be increased by the amount of any after-imposed Federal tax, provided the Contractor warrants in writing that no amount for such newly imposed Federal excise tax or duty or rate increase was included in the contract price, as a contingency reserve or otherwise.

(d) The contract price shall be decreased by the amount of any after-relieved Federal tax.

(e) The contract price shall be decreased by the amount of any Federal excise tax or duty, except social security or other employment taxes, that the Contractor is required to pay or bear, or does not obtain a refund of, through the Contractor's fault, negligence, or failure to follow instructions of the Contracting Officer.

(f) No adjustment shall be made in the contract price under this clause unless the amount of the adjustment exceeds $250.

(g) The Contractor shall promptly notify the Contracting Officer of all matters relating to any Federal excise tax or duty that reasonably may be expected to result in either an increase or decrease in the contract price and shall take appropriate action as the Contracting Officer directs.

(h) The Government shall, without liability, furnish evidence appropriate to establish exemption from any Federal, State, or local tax when the Contractor requests such evidence and a reasonable basis exists to sustain the exemption.

(End of clause)

52.232-5 PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS (SEP 2002)

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

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

standards of quality established under the contract, as approved by the Contracting Officer.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

_____

(Name)

_____

(Title)

_____

(Date)

(d) Refund of unearned amounts. If the Contractor, after making a certified request for progress payments, discovers

that a portion or all of such request constitutes a payment for performance by the Contractor that fails to conform to the specifications, terms, and conditions of this contract (hereinafter referred to as the "unearned amount"), the Contractor shall--

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

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

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

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

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

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

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

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

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

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

(1) Completion and acceptance of all work;

(2) Presentation of a properly executed voucher; and

(3) Presentation of release of all claims against
the Government arising by virtue of this contract, other than claims, in stated amounts, that the Contractor has specifically excepted from the operation of the release. A release may also be required of the assignee if the Contractor's claim to amounts payable under this contract has been assigned under the Assignment of Claims Act of 1940 (31 U.S.C. 3727 and 41 U.S.C. 15).

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

contract, such as contract modifications issued pursuant to the Changes clause, or funding and other administrative changes.

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

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

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

(End of clause)

52.232-17 INTEREST (JUNE 1996)

(a) Except as otherwise provided in this contract under a Price Reduction for Defective Cost or Pricing Data clause or a Cost Accounting Standards clause, all amounts that become payable by the Contractor to the Government under this contract (net of any applicable tax credit under the Internal Revenue Code (26 U.S.C. 1481)) shall bear simple interest from the date due until paid unless paid within 30 days of becoming due. The interest rate shall be the interest rate established by the Secretary of the Treasury as provided in Section 12 of the Contract Disputes Act of 1978 (Public Law 95-563), which is applicable to the period in which the amount becomes due, as provided in paragraph (b) of this clause, and then at the rate applicable for each six-month period as fixed by the Secretary until the amount is paid. reproduce, prepare derivative works, distribute copies to the public, and (b) Amounts shall be due at the earliest of the following dates:

(1) The date fixed under this contract.

(2) The date of the first written demand for payment consistent with this contract, including any demand resulting from a default termination.

(3) The date the Government transmits to the Contractor a proposed supplemental agreement to confirm completed negotiations establishing the amount of debt.

(4) If this contract provides for revision of prices, the date of written notice to the Contractor stating the amount of refund payable in connection with a pricing proposal or a negotiated pricing agreement not confirmed by contract modification.

(c) The interest charge made under this clause may be reduced under the procedures prescribed in 32.614-2 of the Federal Acquisition Regulation in effect on the date of this contract.

(End of clause)

52.232-23 ASSIGNMENT OF CLAIMS (JAN 1986)

(a) The Contractor, under the Assignment of Claims Act, as amended, 31 U.S.C. 3727, 41 U.S.C. 15 (hereafter referred to as "the Act"), may assign its rights to be paid amounts due or to become due as a result of the performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency. The assignee under such an assignment may thereafter further assign or reassign its right under the original assignment to any type of financing institution described in the preceding sentence.

(b) Any assignment or reassignment authorized under the Act and this clause shall cover all unpaid amounts payable

under this contract, and shall not be made to more than one party, except that an assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in the financing of this contract.

(c) The Contractor shall not furnish or disclose to any assignee under this contract any classified document (including this contract) or information related to work under this contract until the Contracting Officer authorizes such action in writing.

(End of clause)

52.232-27 PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS (OCT 2003)

Notwithstanding any other payment terms in this contract, the Government will make invoice payments under the terms and conditions specified in this clause. The Government considers payment as being made on the day a check is dated or the date of an electronic funds transfer. Definitions of pertinent terms are set forth in sections 2.101, 32.001, and 32.902 of the Federal Acquisition Regulation. All days referred to in this clause are calendar days, unless otherwise specified. (However, see paragraph (a)(3) concerning payments due on Saturdays, Sundays, and legal holidays.)

(a) Invoice payments--(1) Types of invoice payments. For purposes of this clause, there are several types of invoice payments that may occur under this contract, as follows:

(i) Progress payments, if provided for elsewhere in this contract, based on Contracting Officer approval of the estimated amount and value of work or services performed, including payments for reaching milestones in any project.

(A) The due date for making such payments is 30 days after the designated billing office receives a proper payment request. If the designated billing office fails to annotate the payment request with the actual date of receipt at the time of receipt, the payment due date is the 30th day after the date of the Contractor's payment request, provided the designated billing office receives a proper payment request and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(B) The due date for payment of any amounts retained by the Contracting Officer in accordance with the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts, is as specified in the contract or, if not specified, 30 days after approval by the Contracting Officer for release to the Contractor.

(ii) Final payments based on completion and acceptance of all work and presentation of release of all claims against the Government arising by virtue of the contract, and payments for partial deliveries that have been accepted by the Government (e.g., each separate building, public work, or other division of the contract for which the price is stated separately in the contract).

(A) The due date for making such payments is the later of the following two events:

(1) The 30th day after the designated billing office receives a proper invoice from the Contractor.

(2) The 30th day after Government acceptance of the work or services completed by the Contractor. For a final invoice when the payment amount is subject to contract settlement actions (e.g., release of claims), acceptance is deemed to occur on the effective date of the contract settlement.

(B) If the designated billing office fails to annotate the invoice with the date of actual receipt at the time of receipt, the invoice payment due date is the 30th day after the date of the Contractor's invoice, provided the designated billing office receives a proper invoice and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(2) Contractor's invoice. The Contractor shall prepare and submit invoices to the designated billing office specified in the contract. A proper invoice must include the items listed in paragraphs (a)(2)(i) through (a)(2)(xi) of this clause. If the invoice does not comply with these requirements, the designated billing office must return it within 7 days after receipt, with the reasons why it is not a proper invoice. When computing any interest penalty owed the Contractor, the Government will take into account if the Government notifies the Contractor of an improper invoice in an untimely manner.

(i) Name and address of the Contractor.

(ii) Invoice date and invoice number. (The Contractor should date invoices as close as possible to the date of mailing or transmission.)

(iii) Contract number or other authorization for work or services performed (including order number and contract line item number).

(iv) Description of work or services performed.

(v) Delivery and payment terms (e.g., discount for prompt payment terms).

(vi) Name and address of Contractor official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment).

(vii) Name (where practicable), title, phone number, and mailing address of person to notify in the event of a defective invoice.

(viii) For payments described in paragraph (a)(1)(i) of this clause, substantiation of the amounts requested and certification in accordance with the requirements of the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts.

(ix) Taxpayer Identification Number (TIN). The Contractor shall include its TIN on the invoice only if required elsewhere in this contract.

(x) Electronic funds transfer (EFT) banking information.

(A) The Contractor shall include EFT banking information on the invoice only if required elsewhere in this contract.

(B) If EFT banking information is not required to be on the invoice, in order for the invoice to be a proper invoice, the Contractor shall have submitted correct EFT banking information in accordance with the applicable solicitation provision (e.g., 52.232-38, Submission of Electronic Funds Transfer Information with Offer), contract clause (e.g., 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration, or 52.232-34, Payment by Electronic Funds Transfer--Other Than Central Contractor Registration), or applicable agency procedures.

(C) EFT banking information is not required if the Government waived the requirement to pay by EFT.

(xi) Any other information or documentation required by the contract.

(3) Interest penalty. The designated payment office will pay an interest penalty automatically, without request from the Contractor, if payment is not made by the due date and the conditions listed in paragraphs (a)(3)(i) through (a)(3)(iii) of this clause are met, if applicable. However, when the due date falls on a Saturday, Sunday, or legal holiday, the designated payment office may make payment on the following working day without incurring a late payment interest penalty.

(i) The designated billing office received a proper invoice.

(ii) The Government processed a receiving report or other Government documentation authorizing payment and there was no disagreement over quantity, quality, Contractor compliance with any contract term or condition, or requested progress payment amount.

(iii) In the case of a final invoice for any balance of funds due the Contractor for work or services performed, the amount was not subject to further contract settlement actions between the Government and the Contractor.

(4) Computing penalty amount. The Government will compute the interest penalty in accordance with the Office of Management and Budget prompt payment regulations at 5 CFR part 1315.

(i) For the sole purpose of computing an interest penalty that might be due the Contractor for payments described in paragraph (a)(1)(ii) of this clause, Government acceptance or approval is deemed to occur constructively on the 7th day after the Contractor has completed the work or services in accordance with the terms and conditions of the contract. If actual acceptance or approval occurs within the constructive acceptance or approval period, the Government will base the determination of an interest penalty on the actual date of acceptance or approval. Constructive acceptance or constructive approval requirements do not apply if there is a disagreement over quantity, quality, or Contractor compliance with a contract provision. These requirements also do not compel Government officials to accept work or services, approve Contractor estimates, perform contract administration functions, or make payment prior to fulfilling their responsibilities.

(ii) The prompt payment regulations at 5 CFR 1315.10(c) do not require the Government to pay interest penalties if payment delays are due to disagreement between the Government and the Contractor over the payment amount or other issues involving contract compliance, or on amounts temporarily withheld or retained in accordance with the terms of the contract. The Government and the Contractor shall resolve claims involving disputes, and any interest that may be payable in accordance with the clause at FAR 52.233-1, Disputes.

(5) Discounts for prompt payment. The designated payment office will pay an interest penalty automatically, without request from the Contractor, if the Government takes a discount for prompt payment improperly. The Government will calculate the interest penalty in accordance with the prompt payment regulations at 5 CFR part 1315.

(6) Additional interest penalty. (i) The designated payment office will pay a penalty amount, calculated in accordance with the prompt payment regulations at 5 CFR part 1315 in addition to the interest penalty amount only if--

(A) The Government owes an interest penalty of $1 or more;

(B) The designated payment office does not pay the interest penalty within 10 days after the date the invoice amount is paid; and

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

(ii)(A) The Contractor shall support written demands for additional penalty payments with the following data. The Government will not request any additional data. The Contractor shall--

(1) Specifically assert that late payment interest is due under a specific invoice, and request payment of all overdue late payment interest penalty and such additional penalty as may be required;

(2) Attach a copy of the invoice on which the unpaid late payment interest was due; and

(3) State that payment of the principal has been received, including the date of receipt.

(B) If there is no postmark or the postmark is illegible--

(1) The designated payment office that receives the demand will annotate it with the date of receipt provided the demand is received on or before the 40th day after payment was made; or

(2) If the designated payment office fails to make the required annotation, the Government will determine the demand's validity based on the date the Contractor has placed on the demand, provided such date is no later than the 40th day after payment was made.

(b) Contract financing payments. If this contract provides for contract financing, the Government will make contract financing payments in accordance with the applicable contract financing clause.

(c) Subcontract clause requirements. The Contractor shall include in each subcontract for property or services (including a material supplier) for the purpose of performing this contract the following:

(1) Prompt payment for subcontractors. A payment clause that obligates the Contractor to pay the subcontractor for satisfactory performance under its subcontract not later than 7 days from receipt of payment out of such amounts as are paid to the Contractor under this contract.

(2) Interest for subcontractors. An interest penalty clause that obligates the Contractor to pay to the subcontractor an interest penalty for each payment not made in accordance with the payment clause--

(i) For the period beginning on the day after the required payment date and ending on the date on which payment of the amount due is made; and

(ii) Computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty.

(3) Subcontractor clause flowdown. A clause requiring each subcontractor to use:

(i) Include a payment clause and an interest penalty clause conforming to the standards set forth in paragraphs (c)(1) and (c)(2) of this clause in each of its subcontracts; and

(ii) Require each of its subcontractors to include such clauses in their subcontracts with each lower-tier subcontractor or supplier.

(d) Subcontract clause interpretation. The clauses required by paragraph (c) of this clause shall not be construed to impair the right of the Contractor or a subcontractor at any tier to negotiate, and to include in their subcontract, provisions that--

(1) Retainage permitted. Permit the Contractor or a subcontractor to retain (without cause) a specified percentage of each progress payment otherwise due to a subcontractor for satisfactory performance under the subcontract without incurring any obligation to pay a late payment interest penalty, in accordance with terms and conditions agreed to by the parties to the subcontract, giving such recognition as the parties deem appropriate to the ability of a subcontractor to furnish a performance bond and a payment bond;

(2) Withholding permitted. Permit the Contractor or subcontractor to make a determination that part or all of the subcontractor's request for payment may be withheld in accordance with the subcontract agreement; and

(3) Withholding requirements. Permit such withholding without incurring any obligation to pay a late payment penalty if--

(i) A notice conforming to the standards of paragraph (g) of this clause previously has been furnished to the subcontractor; and

(ii) The Contractor furnishes to the Contracting Officer a copy of any notice issued by a Contractor pursuant to paragraph (d)(3)(i) of this clause.

(e) Subcontractor withholding procedures. If a Contractor, after making a request for payment to the Government but before making a payment to a subcontractor for the subcontractor's performance covered by the payment request, discovers that all or a portion of the payment otherwise due such subcontractor is subject to withholding from the subcontractor in accordance with the subcontract agreement, then the Contractor shall--

(1) Subcontractor notice. Furnish to the subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon ascertaining the cause giving rise to a withholding, but prior to the due date for subcontractor payment;

(2) Contracting Officer notice. Furnish to the Contracting Officer, as soon as practicable, a copy of the notice furnished to the subcontractor pursuant to paragraph (e)(1) of this clause;

(3) Subcontractor progress payment reduction. Reduce the subcontractor's progress payment by an amount not to exceed the amount specified in the notice of withholding furnished under paragraph (e)(1) of this clause;

(4) Subsequent subcontractor payment. Pay the subcontractor as soon as practicable after the correction of the identified subcontract performance deficiency, and--

(i) Make such payment within--

(A) Seven days after correction of the identified subcontract performance deficiency (unless the funds therefor must be recovered from the Government because of a reduction under paragraph
(e)(5)(i)) of this clause; or

(B) Seven days after the Contractor recovers such funds from the Government; or

(ii) Incur an obligation to pay a late payment interest penalty computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contracts Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty;

(5) Notice to Contracting Officer. Notify the Contracting Officer upon--

(i) Reduction of the amount of any subsequent certified application for payment; or

(ii) Payment to the subcontractor of any withheld amounts of a progress payment, specifying--

(A) The amounts withheld under paragraph (e)(1) of this clause; and

(B) The dates that such withholding began and ended; and

(6) Interest to Government. Be obligated to pay to the Government an amount equal to interest on the withheld payments (computed in the manner provided in 31 U.S.C. 3903(c)(1)), from the 8th day after receipt of the withheld amounts from the Government until--

(i) The day the identified subcontractor performance deficiency is corrected; or

(ii) The date that any subsequent payment is reduced under paragraph (e)(5)(i) of this clause.

(f) Third-party deficiency reports--(1) Withholding from subcontractor. If a Contractor, after making payment to a first-tier subcontractor, receives from a supplier or subcontractor of the first-tier subcontractor (hereafter referred to as a “second-tier subcontractor”) a written notice in accordance with section 2 of the Act of August 24, 1935 (40

U.S.C. 270b, Miller Act), asserting a deficiency in such first-tier subcontractor's performance under the contract for which the Contractor may be ultimately liable, and the Contractor determines that all or a portion of future payments otherwise due such first-tier subcontractor is subject to withholding in accordance with the subcontract agreement, the Contractor may, without incurring an obligation to pay an interest penalty under paragraph (e)(6) of this clause--

(i) Furnish to the first-tier subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon making such determination; and

(ii) Withhold from the first-tier subcontractor's next available progress payment or payments an amount not to exceed the amount specified in the notice of withholding furnished under paragraph (f)(1)(i) of this clause.

(2) Subsequent payment or interest charge. As soon as practicable, but not later than 7 days after receipt of satisfactory written notification that the identified subcontract performance deficiency has been corrected, the Contractor shall--

(i) Pay the amount withheld under paragraph (f)(1)(ii) of this clause to such first-tier subcontractor; or

(ii) Incur an obligation to pay a late payment interest penalty to such first-tier subcontractor computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contracts DisputesAct of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty.

(g) Written notice of subcontractor withholding. The Contractor shall issue a written notice of any withholding to a subcontractor (with a copy furnished to the Contracting Officer), specifying--

(1) The amount to be withheld;

(2) The specific causes for the withholding under the terms of the subcontract; and

(3) The remedial actions to be taken by the subcontractor in order to receive payment of the amounts withheld.

(h) Subcontractor payment entitlement. The Contractor may not request payment from the Government of any amount withheld or retained in accordance with paragraph (d) of this clause until such time as the Contractor has determined and certified to the Contracting Officer that the subcontractor is entitled to the payment of such amount.

(i) Prime-subcontractor disputes. A dispute between the Contractor and subcontractor relating to the amount or entitlement of a subcontractor to a payment or a late payment interest penalty under a clause included in the subcontract pursuant to paragraph (c) of this clause does not constitute a dispute to which the Government is a party. The Government may not be interpleaded in any judicial or administrative proceeding involving such a dispute.

(j) Preservation of prime-subcontractor rights. Except as provided in paragraph (i) of this clause, this clause shall not limit or impair any contractual, administrative, or judicial remedies otherwise available to the Contractor or a subcontractor in the event of a dispute involving late payment or nonpayment by the Contractor or deficient subcontract performance or nonperformance by a subcontractor.

(k) Non-recourse for prime contractor interest penalty. The Contractor's obligation to pay an interest penalty to a subcontractor pursuant to the clauses included in a subcontract under paragraph (c) of this clause shall not be construed to be an obligation of the Government for such interest penalty. A cost-reimbursement claim may not include any amount for reimbursement of such interest penalty.

(l) Overpayments. If the Contractor becomes aware of a duplicate contract financing or invoice payment or that the Government has otherwise overpaid on a contract financing or invoice payment, the Contractor shall immediately notify the Contracting Officer and request instructions for disposition of the overpayment.

(End of clause)

52.232-34 PAYMENT BY ELECTRONIC FUNDS TRANSFER—OTHER THAN CENTRAL CONTRACTOR REGISTRATION (MAY 1999)

(a) Method of payment. (1) All payments by the Government under this contract shall be made by electronic funds transfer (EFT) except as provided in paragraph (a)(2) of this clause. As used in this clause, the term "EFT" refers to the funds transfer and may also include the payment information transfer.

(2) In the event the Government is unable to release one or more payments by EFT, the Contractor agrees to either--

(i) Accept payment by check or some other mutually agreeable method of payment; or

(ii) Request the Government to extend payment due dates until such time as the Government makes payment by EFT (but see paragraph (d) of this clause).

(b) Mandatory submission of Contractor's EFT information. (1) The Contractor is required to provide the Government with the information required to make payment by EFT (see paragraph (j) of this clause). The Contractor shall provide this information directly to the office designated in this contract to receive that information (hereafter: "designated office"') no later than 15 days prior to submission of the first request for payment. If not otherwise specified in this contract, the payment office is the designated office for receipt of the Contractor's EFT information. If more than one designated office is named for the contract, the Contractor shall provide a separate notice to each office. In the event that the EFT information changes, the Contractor shall be responsible for providing the updated information to the designated office(s).

(2) If the Contractor provides EFT information applicable to multiple contracts, the Contractor shall specifically state the applicability of this EFT information in terms acceptable to the designated office. However, EFT information supplied to a designated office shall be applicable only to contracts that identify that designated office as the office to receive EFT information for that contract.

(c) Mechanisms for EFT payment. The Government may make payment by EFT through either the Automated Clearing House (ACH) network, subject to the rules of the National Automated Clearing House Association, or the Fedwire Transfer System. The rules governing Federal payments through the ACH are contained in 31 CFR part 210.

(d) Suspension of payment. (1) The Government is not required to make any payment under this contract until after receipt, by the designated office, of the correct EFT payment information from the Contractor. Until receipt of the correct EFT information, any invoice or contract financing request shall be deemed not to be a proper invoice for the purpose of prompt payment under this contract. The prompt payment terms of the contract regarding notice of an improper invoice and delays in accrual of interest penalties apply.

(2) If the EFT information changes after submission of correct EFT information, the Government shall begin using the changed EFT information no later than 30 days after its receipt by the designated office to the extent payment is made by EFT. However, the Contractor may request that no further payments be made until the updated EFT information is implemented by the payment office. If such suspension would result in a late payment under the prompt payment terms of this contract, the Contractor's request for suspension shall extend the due date for payment by the number of days of the suspension.

(e) Liability for uncompleted or erroneous transfers. (1) If an uncompleted or erroneous transfer occurs because the Government used the Contractor's EFT information incorrectly, the Government remains responsible for--

(i) Making a correct payment;

(ii) Paying any prompt payment penalty due; and

(iii) Recovering any erroneously directed funds.

(2) If an uncompleted or erroneous transfer occurs because the Contractor's EFT information was incorrect, or was revised within 30 days of Government release of the EFT payment transaction instruction to the Federal Reserve System, and--

(i) If the funds are no longer under the control of the payment office, the Government is deemed to have made payment and the Contractor is responsible for recovery of any erroneously directed funds; or

(ii) If the funds remain under the control of the payment office, the Government shall not make payment and the provisions of paragraph (d) shall apply.

(f) EFT and prompt payment. A payment shall be deemed to have been made in a timely manner in accordance with the prompt payment terms of this contract if, in the EFT payment transaction instruction released to the Federal Reserve System, the date specified for settlement of the payment is on or before the prompt payment due date, provided the specified payment date is a valid date under the rules of the Federal Reserve System.

(g) EFT and assignment of claims. If the Contractor assigns the proceeds of this contract as provided for in the assignment of claims terms of this contract, the Contractor shall require as a condition of any such assignment, that the assignee shall provide the EFT information required by paragraph (j) of this clause to the designated office, and shall be paid by EFT in accordance with the terms of this clause. In all respects, the requirements of this clause shall apply to the assignee as if it were the Contractor. EFT information that shows the ultimate recipient of the transfer to be other than the Contractor, in the absence of a proper assignment of claims acceptable to the Government, is incorrect EFT information within the meaning of paragraph (d) of this clause.

(h) Liability for change of EFT information by financial agent. The Government is not liable for errors resulting from changes to EFT information provided by the Contractor's financial agent.

(i) Payment information. The payment or disbursing office shall forward to the Contractor available payment information that is suitable for transmission as of the date of release of the EFT instruction to the Federal Reserve System. The Government may request the Contractor to designate a desired format and method(s) for delivery of payment information from a list of formats and methods the payment office is capable of executing. However, the Government does not guarantee that any particular format or method of delivery is available at any particular payment office and retains the latitude to use the format and delivery method most convenient to the Government. If the Government makes payment by check in accordance with paragraph (a) of this clause, the Government shall mail the payment information to the remittance address in the contract.

(j) EFT information. The Contractor shall provide the following information to the designated office. The Contractor may supply this data for this or multiple contracts (see paragraph (b) of this clause). The Contractor shall designate a single financial agent per contract capable of receiving and processing the EFT information using the EFT methods described in paragraph (c) of this clause.

(1) The contract number (or other procurement identification number).

(2) The Contractor's name and remittance address, as stated in the contract(s).

(3) The signature (manual or electronic, as appropriate), title, and telephone number of the Contractor official authorized to provide this information.

(4) The name, address, and 9-digit Routing Transit Number of the Contractor's financial agent.

(5) The Contractor's account number and the type of account (checking, saving, or lockbox).

(6) If applicable, the Fedwire Transfer System telegraphic abbreviation of the Contractor's financial agent.

(7) If applicable, the Contractor shall also provide the name, address, telegraphic abbreviation, and 9-digit Routing Transit Number of the correspondent financial institution receiving the wire transfer payment if the Contractor's financial agent is not directly on-line to the Fedwire Transfer System; and, therefore, not the receiver of the wire transfer payment.

(End of clause)

52.233-1 DISPUTES. (JUL 2002)

(a) This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613).

(b) Except as provided in the Act, all disputes arising under or relating to this contract shall be resolved under this clause.

(c) Claim, as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to this contract. However, a written demand or written assertion by the Contractor seeking the payment of money exceeding $100,000 is not a claim under the Act until certified. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim under the Act. The submission may be converted to a claim under the Act, by complying with the submission and certification requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.

(d)(1) A claim by the Contractor shall be made in writing and, unless otherwise stated in this contract, submitted within 6 years after accrual of the claim to the Contracting Officer for a written decision. A claim by the Government against the Contractor shall be subject to a written decision by the Contracting Officer.

(2)(i) The contractors shall provide the certification specified in subparagraph (d)(2)(iii) of this clause when submitting any claim -

(A) Exceeding $100,000; or

(B) Regardless of the amount claimed, when using -

(1) Arbitration conducted pursuant to 5 U.S.C. 575-580; or

(2) Any other alternative means of dispute resolution (ADR) technique that the agency elects to handle in accordance with the Administrative Dispute Resolution Act (ADRA).

(ii) The certification requirement does not apply to issues in controversy that have not been submitted as all or part of a claim.

(iii) The certification shall state as follows: "I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the Contractor believes the Government is liable; and that I am duly authorized to certify the claim on behalf of the Contractor.

(3) The certification may be executed by any person duly authorized to bind the Contractor with respect to the claim.

(e) For Contractor claims of $100,000 or less, the Contracting Officer must, if requested in writing by the

Contractor, render a decision within 60 days of the request. For Contractor-certified claims over $100,000, the Contracting Officer must, within 60 days, decide the claim or notify the Contractor of the date by which the decision will be made.

(f) The Contracting Officer's decision shall be final unless the Contractor appeals or files a suit as provided in the Act.

(g) If the claim by the Contractor is submitted to the Contracting Officer or a claim by the Government is presented to the Contractor, the parties, by mutual consent, may agree to use alternative disput resolution (ADR). If the Contractor refuses an offer for ADR, the Contractor shall inform the Contracting Officer, in writing, of the Contractor's specific reasons for rejecting the request.

(h) The Government shall pay interest on the amount found due and unpaid from (1) the date the Contracting Officer receives the claim (certified, if required); or (2) the date that payment otherwise would be due, if that date is later, until the date of payment. With regard to claims having defective certifications, as defined in (FAR) 48 CFR 33.201, interest shall be paid from the date that the Contracting Officer initially receives the claim. Simple interest on claims shall be paid at the rate, fixed by the Secretary of the Treasury as provided in the Act, which is applicable to the period during which the Contracting Officer receives the claim and then at the rate applicable for each 6-month period as fixed by the Treasury Secretary during the pendency of the claim.

(i) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under the contract, and comply with any decision of the Contracting Officer.

(End of clause)

52.233-3 PROTEST AFTER AWARD (AUG. 1996)

(a) Upon receipt of a notice of protest (as defined in FAR 33.101) or a determination that a protest is likely (see FAR 33.102(d)), the Contracting Officer may, by written order to the Contractor, direct the Contractor to stop performance of the work called for by this contract. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Upon receipt of the final decision in the protest, the Contracting Officer shall either--

(1) Cancel the stop-work order; or

(2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.

(b) If a stop-work order issued under this clause is canceled either before or after a final decision in the protest, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if--

(1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and

(2) The Contractor asserts its right to an adjustment within 30 days after the end of the period of work stoppage; provided, that if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon a proposal at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at

the termination settlement.

(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

(e) The Government's rights to terminate this contract at any time are not affected by action taken under this clause.

(f) If, as the result of the Contractor's intentional or negligent misstatement, misrepresentation, or miscertification, a protest related to this contract is sustained, and the Government pays costs, as provided in FAR 33.102(b)(2) or 33.104(h)(1), the Government may require the Contractor to reimburse the Government the amount of such costs. In addition to any other remedy available, and pursuant to the requirements of Subpart 32.6, the Government may collect this debt by offsetting the amount against any payment due the Contractor under any contract between the Contractor and the Government.

(End of clause)

52.236-2 DIFFERING SITE CONDITIONS (APR 1984)

As prescribed in 36.502, insert the following clause in solicitations and contracts when a fixed-price construction contract or a fixed-price dismantling, demolition, or removal of improvements contract is contemplated and the contract amount is expected to exceed the small purchase limitation. The Contracting Officer may insert the clause in solicitations and contracts when a fixed-price construction or a fixed-price contract for dismantling, demolition, or removal of improvements is contemplated and the contract amount is expected to be within the small purchase limitation.

(a) The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the Contracting Officer of

(1) subsurface or latent physical conditions at the site which differ materially from those indicated in this contract, or

(2) unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the contract.

(b) The Contracting Officer shall investigate the site conditions promptly after receiving the notice. If the conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the work under this contract, whether or not changed as a result of the conditions, an equitable adjustment shall be made under this clause and the contract modified in writing accordingly.

(c) No request by the Contractor for an equitable adjustment to the contract under this clause shall be allowed, unless the Contractor has given the written notice required; provided, that the time prescribed in (a) above for giving written notice may be extended by the Contracting Officer.

(d) No request by the Contractor for an equitable adjustment to the contract for differing site conditions shall be allowed if made after final payment under this contract.

(End of clause)

52.236-3 SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK (APR 1984)

(a) The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of

the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to

(1) conditions bearing upon transportation, disposal, handling, and storage of materials;

(2) the availability of labor, water, electric power, and roads;

(3) uncertainties of weather, river stages, tides, or similar physical conditions at the site;

(4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during work performance. The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Government, as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the Government.

(b) The Government assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the Government. Nor does the Government assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

(End of clause)

52.236-5 MATERIAL AND WORKMANSHIP (APR 1984)

(a) All equipment, material, and articles incorporated into the work covered by this contract shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this contract. References in the specifications to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of the Contracting Officer, is equal to that named in the specifications, unless otherwise specifically provided in this contract.

(b) The Contractor shall obtain the Contracting Officer's approval of the machinery and mechanical and other equipment to be incorporated into the work. When requesting approval, the Contractor shall furnish to the Contracting Officer the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the machinery and mechanical and other equipment. When required by this contract or by the Contracting Officer, the Contractor shall also obtain the Contracting Officer's approval of the material or articles which the Contractor contemplates incorporating into the work. When requesting approval, the Contractor shall provide full information concerning the material or articles. When directed to do so, the Contractor shall submit samples for approval at the Contractor's expense, with all shipping charges prepaid. Machinery, equipment, material, and articles that do not have the required approval shall be installed or used at the risk of subsequent rejection.

(c) All work under this contract shall be performed in a skillful and workmanlike manner. The Contracting Officer may require, in writing, that the Contractor remove from the work any employee the Contracting Officer deems incompetent, careless, or otherwise objectionable.

(End of clause)

52.236-6 SUPERINTENDENCE BY THE CONTRACTOR (APR 1984)

At all times during performance of this contract and until the work is completed and accepted, the Contractor shall directly superintend the work or assign and have on the worksite a competent superintendent who is satisfactory to the Contracting Officer and has authority to act for the Contractor.

(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.

(End of clause)

52.236-8 OTHER CONTRACTS (APR 1984)

The Government may undertake or award other contracts for additional work at or near the site of the work under this contract. The Contractor shall fully cooperate with the other contractors and with Government employees and shall carefully adapt scheduling and performing the work under this contract to accommodate the additional work, heeding any direction that may be provided by the Contracting Officer. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor or by Government employees.

(End of clause)

52.236-9 PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS (APR 1984)

(a) The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this contract. The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during contract performance, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Contracting Officer.

(b) The Contractor shall protect from damage all existing improvements and utilities

(1) at or near the work site, and

(2) on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. The Contractor shall repair any damage to those facilities, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable

care in performing the work. If the Contractor fails or refuses to repair the damage promptly, the Contracting Officer may have the necessary work performed and charge the cost to the Contractor.

(End of clause)

52.236-10 OPERATIONS AND STORAGE AREAS (APR 1984)

(a) The Contractor shall confine all operations (including storage of materials) on Government premises to areas authorized or approved by the Contracting Officer. The Contractor shall hold and save the Government, its officers and agents, free and harmless from liability of any nature occasioned by the Contractor's performance.

(b) Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be erected by the Contractor only with the approval of the Contracting Officer and shall be built with labor and materials furnished by the Contractor without expense to the Government. The temporary buildings and utilities shall remain the property of the Contractor and shall be removed by the Contractor at its expense upon completion of the work. With the written consent of the Contracting Officer, the buildings and utilities may be abandoned and need not be removed.

(c) The Contractor shall, under regulations prescribed by the Contracting Officer, use only established roadways, or use temporary roadways constructed by the Contractor when and as authorized by the Contracting Officer. When materials are transported in prosecuting the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any Federal, State, or local law or regulation. When it is necessary to cross curbs or sidewalks, the Contractor shall protect them from damage. The Contractor shall repair or pay for the repair of any damaged curbs, sidewalks, or roads.

(End of clause)

52.236-11 USE AND POSSESSION PRIOR TO COMPLETION (APR 1984)

(a) The Government shall have the right to take possession of or use any completed or partially completed part of the work. Before taking possession of or using any work, the Contracting Officer shall furnish the Contractor a list of items of work remaining to be performed or corrected on those portions of the work that the Government intends to take possession of or use. However, failure of the Contracting Officer to list any item of work shall not relieve the Contractor of responsibility for complying with the terms of the contract. The Government's possession or use shall not be deemed an acceptance of any work under the contract.

(b) While the Government has such possession or use, the Contractor shall be relieved of the responsibility for the loss of or damage to the work resulting from the Government's possession or use, notwithstanding the terms of the clause in this contract entitled "Permits and Responsibilities." If prior possession or use by the Government delays the progress of the work or causes additional expense to the Contractor, an equitable adjustment shall be made in the contract price or the time of completion, and the contract shall be modified in writing accordingly.

(End of clause)

52.236-12 CLEANING UP (APR 1984)

The Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. Before completing the work, the Contractor shall remove from the work and premises any rubbish, tools, scaffolding, equipment, and materials that are not the property of the Government. Upon completing the work, the Contractor shall leave the work area in a clean, neat, and orderly condition satisfactory to the Contracting Officer.

(End of clause)

52.236-13 ACCIDENT PREVENTION (NOV 1991)

(a) The Contractor shall provide and maintain work environments and procedures which will

(1) safeguard the public and Government personnel, property, materials, supplies, and equipment exposed to Contractor operations and activities;

(2) avoid interruptions of Government operations and delays in project completion dates; and

(3) control costs in the performance of this contract.

(b) For these purposes on contracts for construction or dismantling, demolition, or removal of improvements, the Contractor shall-

(1) Provide appropriate safety barricades, signs, and signal lights;

(2) Comply with the standards issued by the Secretary of Labor at 29 CFR Part 1926 and 29 CFR Part 1910; and

(3) Ensure that any additional measures the Contracting Officer determines to be reasonably necessary for the purposes are taken.

(c) If this contract is for construction or dismantling, demolition or removal of improvements with any Department of Defense agency or component, the Contractor shall comply with all pertinent provisions of the latest version of U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, in effect on the date of the solicitation.

(d) Whenever the Contracting Officer becomes aware of any noncompliance with these requirements or any condition which poses a serious or imminent danger to the health or safety of the public or Government personnel, the Contracting Officer shall notify the Contractor orally, with written confirmation, and request immediate initiation of corrective action. This notice, when delivered to the Contractor or the Contractor's representative at the work site, shall be deemed sufficient notice of the noncompliance and that corrective action is required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to promptly take corrective action, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall not be entitled to any equitable adjustment of the contract price or extension of the performance schedule on any stop work order issued under this clause.

(f) The Contractor shall insert this clause, including this paragraph (e), with appropriate changes in the designation of the parties, in subcontracts.

(End of clause)

52.236-15 SCHEDULES FOR CONSTRUCTION CONTRACTS (APR 1984)

(a) The Contractor shall, within five days after the work commences on the contract or another period of time determined by the Contracting Officer, prepare and submit to the Contracting Officer for approval three copies of a practicable schedule showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the several salient features of the work (including acquiring materials, plant, and equipment). The schedule shall be in the form of a progress chart of suitable scale to

indicate appropriately the percentage of work scheduled for completion by any given date during the period. If the Contractor fails to submit a schedule within the time prescribed, the Contracting Officer may withhold approval of progress payments until the Contractor submits the required schedule.

(b) The Contractor shall enter the actual progress on the chart as directed by the Contracting Officer, and upon doing so shall immediately deliver three copies of the annotated schedule to the Contracting Officer. If, in the opinion of the Contracting Officer, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Contracting Officer, without additional cost to the Government. In this circumstance, the Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of construction plant, and to submit for approval any supplementary schedule or schedules in chart form as the Contracting Officer deems necessary to demonstrate how the approved rate of progress will be regained.

(c) Failure of the Contractor to comply with the requirements of the Contracting Officer under this clause shall be grounds for a determination by the Contracting Officer that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the contract. Upon making this determination, the Contracting Officer may terminate the Contractor's right to proceed with the work, or any separable part of it, in accordance with the default terms of this contract.

(End of clause)

52.236-17 LAYOUT OF WORK (APR 1984)

The Contractor shall lay out its work from Government established base lines and bench marks indicated on the drawings, and shall be responsible for all measurements in connection with the layout. The Contractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to lay out any part of the work. The Contractor shall be responsible for executing the work to the lines and grades that may be established or indicated by the Contracting Officer. The Contractor shall also be responsible for maintaining and preserving all stakes and other marks established by the Contracting Officer until authorized to remove them. If such marks are destroyed by the Contractor or through its negligence before their removal is authorized, the Contracting Officer may replace them and deduct the expense of the replacement from any amounts due or to become due to the Contractor.

(End of clause)

52.236-21 SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION (FEB 1997)

(a) The Contractor shall keep on the work site a copy of the drawings and specifications and shall at all times give the Contracting Officer access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, the specifications shall govern. In case of discrepancy in the figures, in the drawings, or in the specifications, the matter shall be promptly submitted to the Contracting Officer, who shall promptly make a determination in writing. Any adjustment by the Contractor without such a determination shall be at its own risk and expense. The Contracting Officer shall furnish from time to time such detailed drawings and other information as considered necessary, unless otherwise provided.

(b) Wherever in the specifications or upon the drawings the words "directed", "required", "ordered", "designated", "prescribed", or words of like import are used, it shall be understood that the "direction", "requirement", "order", "designation", or "prescription", of the Contracting Officer is intended and similarly the words "approved", "acceptable", "satisfactory", or words of like import shall mean "approved by," or "acceptable to", or "satisfactory to" the Contracting Officer, unless otherwise expressly stated.

(c) Where "as shown," as indicated", "as detailed", or words of similar import are used, it shall be understood that the reference is made to the drawings accompanying this contract unless stated otherwise. The word "provided" as used herein shall be understood to mean "provide complete in place," that is "furnished and installed".

(d) Shop drawings means drawings, submitted to the Government by the Contractor, subcontractor, or any lower tier subcontractor pursuant to a construction contract, showing in detail (1) the proposed fabrication and assembly of structural elements, and (2) the installation (i.e., fit, and attachment details) of materials or equipment. It includes drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, and similar materials furnished by the contractor to explain in detail specific portions of the work required by the contract. The Government may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.

(e) If this contract requires shop drawings, the Contractor shall coordinate all such drawings, and review them for accuracy, completeness, and compliance with contract requirements and shall indicate its approval thereon as evidence of such coordination and review. Shop drawings submitted to the Contracting Officer without evidence of the Contractor's approval may be returned for resubmission. The Contracting Officer will indicate an approval or disapproval of the shop drawings and if not approved as submitted shall indicate the Government's reasons therefor. Any work done before such approval shall be at the Contractor's risk. Approval by the Contracting Officer shall not relieve the Contractor from responsibility for any errors or omissions in such drawings, nor from responsibility for complying with the requirements of this contract, except with respect to variations described and approved in accordance with (f) below.

(f) If shop drawings show variations from the contract requirements, the Contractor shall describe such variations in writing, separate from the drawings, at the time of submission. If the Contracting Officer approves any such variation, the Contracting Officer shall issue an appropriate contract modification, except that, if the variation is minor or does not involve a change in price or in time of performance, a modification need not be issued.

(g) The Contractor shall submit to the Contracting Officer for approval four copies (unless otherwise indicated) of all shop drawings as called for under the various headings of these specifications. Three sets (unless otherwise indicated) of all shop drawings, will be retained by the Contracting Officer and one set will be returned to the Contractor.

(End of clause)

52.236-26 PRECONSTRUCTION CONFERENCE (FEB 1995)

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

(End of clause)

52.242-13 BANKRUPTCY (JUL 1995)

In the event the Contractor enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the Contractor agrees to furnish, by certified mail or electronic commerce method authorized by the contract, written notification of the bankruptcy to the Contracting Officer responsible for administering the contract. This notification shall be furnished within five days of the initiation of the proceedings relating to bankruptcy filing. This notification shall include the date on which the bankruptcy petition was filed, the identity of the court in which

the bankruptcy petition was filed, and a listing of Government contract numbers and contracting offices for all Government contracts against which final payment has not been made. This obligation remains in effect until final payment under this contract.

(End of clause)

52.242-14 SUSPENSION OF WORK (APR 1984)

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

(b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of the Contracting Officer in the administration of this contract, or (2) by the Contracting Officer's failure to act within the time specified in this contract (or within a reasonable time if not specified), an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) necessarily caused by the unreasonable suspension, delay, or interruption, and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an equitable adjustment is provided for or excluded under any other term or condition of this contract. (c) A claim under this clause shall not be allowed (1) for any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order), and (2) unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

(End of clause)

52.243-4 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.

(End of clause)

52.244-2 SUBCONTRACTS (AUG 1998)

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

Approved purchasing system means a Contractor's purchasing system that has been reviewed and approved in accordance with Part 44 of the Federal Acquisition Regulation (FAR).

Consent to subcontract means the Contracting Officer's written consent for the Contractor to enter into a particular subcontract.

Subcontract means any contract, as defined in FAR Subpart 2.1, entered into by a subcontractor to furnish supplies or services for performance of the prime contract or a subcontract. It includes, but is not limited to, purchase orders, and changes and modifications to purchase orders.

(b) This clause does not apply to subcontracts for special test equipment when the contract contains the clause at FAR 52.245-18, Special Test Equipment.

(c) When this clause is included in a fixed-price type contract, consent to subcontract is required only on unpriced contract actions (including unpriced modifications or unpriced delivery orders), and only if required in accordance with paragraph (d) or (e) of this clause.

(d) If the Contractor does not have an approved purchasing system, consent to subcontract is required for any subcontract that--

(1) Is of the cost-reimbursement, time-and-materials, or labor-hour type; or

(2) Is fixed-price and exceeds--

(i) For a contract awarded by the Department of Defense, the Coast Guard, or the National Aeronautics and Space Administration, the greater of the simplified acquisition threshold or 5 percent of the total estimated cost of the contract; or

(ii) For a contract awarded by a civilian agency other than the Coast Guard and the National Aeronautics and Space Administration, either the simplified acquisition threshold or 5 percent of the total estimated cost of the contract.

(e) If the Contractor has an approved purchasing system, the Contractor nevertheless shall obtain the Contracting Officer's written consent before placing the following subcontracts:

NONE

(f)(1) The Contractor shall notify the Contracting Officer reasonably in advance of placing any subcontract or modification thereof for which consent is required under paragraph (c), (d), or (e) of this clause, including the following information:

(i) A description of the supplies or services to be subcontracted.

(ii) Identification of the type of subcontract to be used.

(iii) Identification of the proposed subcontractor.

(iv) The proposed subcontract price.

(v) The subcontractor's current, complete, and accurate cost or pricing data and Certificate of Current Cost or Pricing Data, if required by other contract provisions.

(vi) The subcontractor's Disclosure Statement or Certificate relating to Cost Accounting Standards when such data are required by other provisions of this contract.

(vii) A negotiation memorandum reflecting--

(A) The principal elements of the subcontract price negotiations;

(B) The most significant considerations controlling establishment of initial or revised prices;

(C) The reason cost or pricing data were or were not required;

(D) The extent, if any, to which the Contractor did not rely on the subcontractor's cost or pricing data in determining the price objective and in negotiating the final price;

(E) The extent to which it was recognized in the negotiation that the subcontractor's cost or pricing data were not accurate, complete, or current; the action taken by the Contractor and the subcontractor; and the effect of any such defective data on the total price negotiated;

(F) The reasons for any significant difference between the Contractor's price objective and the price negotiated; and

(G) A complete explanation of the incentive fee or profit plan when incentives are used. The explanation shall identify each critical performance element, management decisions used to quantify each incentive element, reasons for the incentives, and a summary of all trade-off possibilities considered.

(2) The Contractor is not required to notify the Contracting Officer in advance of entering into any subcontract for which consent is not required under paragraph (c), (d), or (e) of this clause.

(g) Unless the consent or approval specifically provides otherwise, neither consent by the Contracting Officer to any subcontract nor approval of the Contractor's purchasing system shall constitute a determination--

(1) Of the acceptability of any subcontract terms or conditions;

(2) Of the allowability of any cost under this contract; or

(3) To relieve the Contractor of any responsibility for performing this contract.

(h) No subcontract or modification thereof placed under this contract shall provide for payment on a cost-plus-a-percentage-of-cost basis, and any fee payable under cost-reimbursement type subcontracts shall not exceed the fee limitations in FAR 15.404-4(c)(4)(i).

(i) The Contractor shall give the Contracting Officer immediate written notice of any action or suit filed and prompt notice of any claim made against the Contractor by any subcontractor or vendor that, in the opinion of the Contractor, may result in litigation related in any way to this contract, with respect to which the Contractor may be entitled to reimbursement from the Government.

(j) The Government reserves the right to review the Contractor's purchasing system as set forth in FAR Subpart 44.3.

(k) Paragraphs (d) and (f) of this clause do not apply to the following subcontracts, which were evaluated during negotiations:

_____

_____

(End of clause)

52.246-12 INSPECTION OF CONSTRUCTION (AUG 1996)

(a) Definition. "Work" includes, but is not limited to, materials, workmanship, and manufacture and fabrication of components.

(b) The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work performed under the contract conforms to contract requirements. The Contractor shall maintain complete inspection records and make them available to the Government. All work shall be conducted under the general direction of the Contracting Officer and is subject to Government inspection and test at all places and at all reasonable times before acceptance to ensure strict compliance with the terms of the contract.

(c) Government inspections and tests are for the sole benefit of the Government and do not--

(1) Relieve the Contractor of responsibility for providing adequate quality control measures;

(2) Relieve the Contractor of responsibility for damage to or loss of the material before acceptance;

(3) Constitute or imply acceptance; or

(4) Affect the continuing rights of the Government after acceptance of the completed work under paragraph (i) of this section.

(d) The presence or absence of a Government inspector does not relieve the Contractor from any contract requirement, nor is the inspector authorized to change any term or condition of the specification without the Contracting Officer's written authorization.

(e) The Contractor shall promptly furnish, at no increase in contract price, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Contracting Officer. The Government may charge to the Contractor any additional cost of inspection or test when

work is not ready at the time specified by the Contractor for inspection or test, or when prior rejection makes reinspection or retest necessary. The Government shall perform all inspections and tests in a manner that will not unnecessarily delay the work. Special, full size, and performance tests shall be performed as described in the contract.

(f) The Contractor shall, without charge, replace or correct work found by the Government not to conform to contract requirements, unless in the public interest the Government consents to accept the work with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.

(g) If the Contractor does not promptly replace or correct rejected work, the Government may (1) by contract or otherwise, replace or correct the work and charge the cost to the Contractor or (2) terminate for default the Contractor's right to proceed.

(h) If, before acceptance of the entire work, the Government decides to examine already completed work by removing it or tearing it out, the Contractor, on request, shall promptly furnish all necessary facilities, labor, and material. If the work is found to be defective or nonconforming in any material respect due to the fault of the Contractor or its subcontractors, the Contractor shall defray the expenses of the examination and of satisfactory reconstruction. However, if the work is found to meet contract requirements, the Contracting Officer shall make an equitable adjustment for the additional services involved in the examination and reconstruction, including, if completion of the work was thereby delayed, an extension of time.

(i) Unless otherwise specified in the contract, the Government shall accept, as promptly as practicable after completion and inspection, all work required by the contract or that portion of the work the Contracting Officer determines can be accepted separately. Acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, or the Government's rights under any warranty or guarantee.

(End of clause)

52.246-21 WARRANTY OF CONSTRUCTION (MAR 1994)

(a) In addition to any other warranties in this contract, the Contractor warrants, except as provided in paragraph (i) of this clause, that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, or design furnished, or workmanship performed by the Contractor or any subcontractor or supplier at any tier.

(b) This warranty shall continue for a period of 1 year from the date of final acceptance of the work. If the Government takes possession of any part of the work before final acceptance, this warranty shall continue for a period of 1 year from the date the Government takes possession.

(c) The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Government-owned or controlled real or personal property, when that damage is the result of--

(1) The Contractor's failure to conform to contract requirements; or

(2) Any defect of equipment, material, workmanship, or design furnished.

(d) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for 1 year from the date of repair or replacement.

(e) The Contracting Officer shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage.

(f) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the Government shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.
(g) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall--

(1) Obtain all warranties that would be given in normal commercial practice;

(2) Require all warranties to be executed, in writing, for the benefit of the Government, if directed by the Contracting Officer; and

(3) Enforce all warranties for the benefit of the Government, if directed by the Contracting Officer.

(h) In the event the Contractor's warranty under paragraph (b) of this clause has expired, the Government may bring suit at its expense to enforce a subcontractor's, manufacturer's, or supplier's warranty.

(i) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defects of material or design furnished by the Government nor for the repair of any damage that results from any defect in Government-furnished material or design.

(j) This warranty shall not limit the Government's rights under the Inspection and Acceptance clause of this contract with respect to latent defects, gross mistakes, or fraud.

(End of clause)

52.248-3 VALUE ENGINEERING--CONSTRUCTION (FEB 2000)

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

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

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

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

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

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

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

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

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

(i) In deliverable end item quantities only; or

(ii) To the contract type only.

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

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

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

(3) A separate, detailed cost estimate for

(i) the affected portions of the existing contract requirement and

(ii) the VECP. The cost reduction associated with the VECP shall take into account the Contractor's allowable development and implementation costs, including any amount attributable to subcontracts under paragraph (h) below.

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

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

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

(7) Identification of any previous submissions of the VECP, including the dates submitted, the agencies and contract numbers involved, and previous Government actions, if known.

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

(e) Government action.

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

If the VECP is not accepted, the Contracting Officer will notify the Contractor in writing, explaining the reasons for rejection. The Contractor may withdraw any VECP, in whole or in part, at any time before it is accepted by the

Government. The Contracting Officer may require that the Contractor provide written notification before undertaking significant expenditures for VECP effort.

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

(f) Sharing.

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

(i) 45 percent for fixed-price contracts or

(ii) 75 percent for cost-reimbursement contracts.

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

(i) Accept the VECP;

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

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

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

(h) Subcontracts. The Contractor shall include an appropriate value engineering clause in any subcontract of $50,000 or more and may include one in subcontracts of lesser value. In computing any adjustment in this contract's price under paragraph (f) above, the Contractor's allowable development and implementation costs shall include any subcontractor's allowable development and implementation costs clearly resulting from a VECP accepted by the Government under this contract, but shall exclude any value engineering incentive payments to a subcontractor. The Contractor may choose any arrangement for subcontractor value engineering incentive payments; provided, that these payments shall not reduce the Government's share of the savings resulting from the VECP.

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

"These data, furnished under the Value Engineering-- Construction clause of contract . . . . . , shall not be disclosed outside the Government or duplicated, used, or disclosed, in whole or in part, for any purpose other than to evaluate a value engineering change proposal submitted under the clause. This restriction does not limit the Government's right to use information contained in these data if it has been obtained or is otherwise available from the Contractor or from another source without limitations." If a VECP is accepted, the Contractor hereby grants the Government unlimited rights in the VECP and supporting data, except that, with respect to data qualifying and submitted as limited rights technical data, the Government shall have the rights specified in the contract modification implementing the VECP and shall appropriately mark the data. (The terms "unlimited rights" and "limited rights" are defined in Part 27 of the Federal Acquisition Regulation.)

(End of clause)

52.249-2 TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE) (SEP 1996) - ALTERNATE I (SEP 1996)

(a) The Government may terminate performance of work under this contract in whole or, from time to time, in part if the Contracting Officer determines that a termination is in the Government's interest. The Contracting Officer shall terminate by delivering to the Contractor a Notice of Termination specifying the extent of termination and the effective date.

(b) After receipt of a Notice of Termination, and except as directed by the Contracting Officer, the Contractor shall immediately proceed with the following obligations, regardless of any delay in determining or adjusting any amounts due under this clause:

(1) Stop work as specified in the notice.

(2) Place no further subcontracts or orders (referred to as subcontracts in this clause) for materials, services, or facilities, except as necessary to complete the continued portion of the contract.

(3) Terminate all subcontracts to the extent they relate to the work terminated.

(4) Assign to the Government, as directed by the Contracting Officer, all right, title, and interest of the Contractor under the subcontracts terminated, in which case the Government shall have the right to settle or to pay any termination settlement proposal arising out of those terminations.

(5) With approval or ratification to the extent required by the Contracting Officer, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts; the approval or ratification will be final for purposes of this clause.

(6) As directed by the Contracting Officer, transfer title and deliver to the Government (i) the fabricated or unfabricated parts, work in process, completed work, supplies, and other material produced or acquired for the work terminated, and (ii) the completed or partially completed plans, drawings, information, and other property that, if the contract had been completed, would be required to be furnished to the Government.

(7) Complete performance of the work not terminated.

(8) Take any action that may be necessary, or that the Contracting Officer may direct, for the protection and preservation of the property related to this contract that is in the possession of the Contractor and in which the Government has or may acquire an interest.

(9) Use its best efforts to sell, as directed or authorized by the Contracting Officer, any property of the types referred to in subparagraph (b)(6) of this clause; provided, however, that the Contractor (i) is not required to extend credit to any purchaser and (ii) may acquire the property under the conditions prescribed by, and at prices approved by, the Contracting Officer. The proceeds of any transfer or disposition will be applied to reduce any payments to be made by the Government under this contract, credited to the price or cost of the work, or paid in any other manner directed by the Contracting Officer.

(c) The Contractor shall submit complete termination inventory schedules no later than 120 days from the effective date of termination, unless extended in writing by the Contracting Officer upon written request of the Contractor within this 120-day period.

(d) After expiration of the plant clearance period as defined in Subpart 45.6 of the Federal Acquisition Regulation, the Contractor may submit to the Contracting Officer a list, certified as to quantity and quality, of termination

inventory not previously disposed of, excluding items authorized for disposition by the Contracting Officer. The Contractor may request the Government to remove those items or enter into an agreement for their storage. Within 15 days, the Government will accept title to those items and remove them or enter into a storage agreement. The Contracting Officer may verify the list upon removal of the items, or if stored, within 45 days from submission of the list, and shall correct the list, as necessary, before final settlement.

(e) After termination, the Contractor shall submit a final termination settlement proposal to the Contracting Officer in the form and with the certification prescribed by the Contracting Officer. The Contractor shall submit the proposal promptly, but no later than 1 year from the effective date of termination, unless extended in writing by the Contracting Officer upon written request of the Contractor within this 1-year period. However, if the Contracting Officer determines that the facts justify it, a termination settlement proposal may be received and acted on after 1 year or any extension. If the Contractor fails to submit the proposal within the time allowed, the Contracting Officer may determine, on the basis of information available, the amount, if any, due the Contractor because of the termination and shall pay the amount determined.

(f) Subject to paragraph (e) of this clause, the Contractor and the Contracting Officer may agree upon the whole or any part of the amount to be paid or remaining to be paid because of the termination. The amount may include a reasonable allowance for profit on work done. However, the agreed amount, whether under this paragraph (g) or paragraph (g) of this clause, exclusive of costs shown in subparagraph (g)(3) of this clause, may not exceed the total contract price as reduced by (1) the amount of payments previously made and (2) the contract price of work not terminated. The contract shall be modified, and the Contractor paid the agreed amount. Paragraph (g) of this clause shall not limit, restrict, or affect the amount that may be agreed upon to be paid under this paragraph.

(g) If the Contractor and Contracting Officer fail to agree on the whole amount to be paid the Contractor because of the termination of work, the Contracting Officer shall pay the Contractor the amounts determined as follows, but without duplication of any amounts agreed upon under paragraph (f) of this clause:

(1) For contract work performed before the effective date of termination, the total (without duplication of any items) of--

(i) The cost of this work;

(ii) The cost of settling and paying termination settlement proposals under terminated subcontracts that are properly chargeable to the terminated portion of the contract if not included in subdivision (g)(1)(i) of this clause; and

(iii) A sum, as profit on subdivision (g)(1)(i) of this clause, determined by the Contracting Officer under 49.202 of the Federal Acquisition Regulation, in effect on the date of this contract, to be fair and reasonable; however, if it appears that the Contractor would have sustained a loss on the entire contract had it been completed, the Contracting Officer shall allow no profit under this subdivision (iii) and shall reduce the settlement to reflect the indicated rate of loss.

(2) The reasonable costs of settlement of the work terminated, including--

(i) Accounting, legal, clerical, and other expenses reasonably necessary for the preparation of termination settlement proposals and supporting data;

(ii) The termination and settlement of subcontracts (excluding the amounts of such settlements); and

(iii) Storage, transportation, and other costs incurred, reasonably necessary for the preservation, protection, or disposition of the termination inventory.

(h) Except for normal spoilage, and except to the extent that the Government expressly assumed the risk of loss, the Contracting Officer shall exclude from the amounts payable to the Contractor under paragraph (g) of this clause, the fair value, as determined by the Contracting Officer, of property that is destroyed, lost, stolen, or damaged so as to become undeliverable to the Government or to a buyer.

(i) The cost principles and procedures of Part 31 of the Federal Acquisition Regulation, in effect on the date of this contract, shall govern all costs claimed, agreed to, or determined under this clause.

(j) The Contractor shall have the right of appeal, under the Disputes clause, from any determination made by the Contracting Officer under paragraph (e), (g), or (l) of this clause, except that if the Contractor failed to submit the termination settlement proposal or request for equitable adjustment within the time provided in paragraph (e) or (l), respectively, and failed to request a time extension, there is no right of appeal.

(k) In arriving at the amount due the Contractor under this clause, there shall be deducted--

(1) All unliquidated advance or other payments to the Contractor under the terminated portion of this contract;

(2) Any claim which the Government has against the Contractor under this contract; and

(3) The agreed price for, or the proceeds of sale of, materials, supplies, or other things acquired by the Contractor or sold under the provisions of this clause and not recovered by or credited to the Government.

(l) If the termination is partial, the Contractor may file a proposal with the Contracting Officer for an equitable adjustment of the price(s) of the continued portion of the contract. The Contracting Officer shall make any equitable adjustment agreed upon. Any proposal by the Contractor for an equitable adjustment under this clause shall be requested within 90 days from the effective date of termination unless extended in writing by the Contracting Officer.

(m)(1) The Government may, under the terms and conditions it prescribes, make partial payments and payments against costs incurred by the Contractor for the terminated portion of the contract, if the Contracting Officer believes the total of these payments will not exceed the amount to which the Contractor will be entitled.

(2) If the total payments exceed the amount finally determined to be due, the Contractor shall repay the excess to the Government upon demand, together with interest computed at the rate established by the Secretary of the Treasury under 50 U.S.C. App. 1215(b)(2). Interest shall be computed for the period from the date the excess payment is received by the Contractor to the date the excess is repaid. Interest shall not be charged on any excess payment due to a reduction in the Contractor's termination settlement proposal because of retention or other disposition of termination inventory until 10 days after the date of the retention or disposition, or a later date determined by the Contracting Officer because of the circumstances.

(n) Unless otherwise provided in this contract or by statute, the Contractor shall maintain all records and documents relating to the terminated portion of this contract for 3 years after final settlement. This includes all books and other evidence bearing on the Contractor's costs and expenses under this contract. The Contractor shall make these records and documents available to the Government, at the Contractor's office, at all reasonable times, without any direct charge. If approved by the Contracting Officer, photographs, microphotographs, or other authentic reproductions may be maintained instead of original records and documents.

(End of clause)

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

(a) If the Contractor refuses or fails to prosecute the work or any separable part, with the diligence that will insure its completion within the time specified in this contract including any extension, or fails to complete the work within this time, the Government may, by written notice to the Contractor, terminate the right to proceed with the work (or the separable part of the work) that has been delayed. In this event, the Government may take over the work and complete it by contract or otherwise, and may take possession of and use any materials, appliances, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the

Government resulting from the Contractor's refusal or failure to complete the work within the specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the Government in completing the work.

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

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

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

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

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

(iv) fires,

(v) floods,

(vi) epidemics,

(vii) quarantine restrictions,

(viii) strikes,

(ix) freight embargoes,

(x) unusually severe weather, or delays of subcontractors or suppliers at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and the subcontractors or suppliers; and

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

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

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

(End of clause)

52.249-5000 BASIS FOR SETTLEMENT OF PROPOSALS

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:

(g) 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.

(h) 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.

(End of Clause)

52.253-1 COMPUTER GENERATED FORMS (JAN 1991)

(a) Any data required to be submitted on a Standard or Optional Form prescribed by the Federal Acquisition Regulation (FAR) may be submitted on a computer generated version of the form, provided there is no change to the name, content, or sequence of the data elements on the form, and provided the form carries the Standard or Optional Form number and edition date.

(b) Unless prohibited by agency regulations, any data required to be submitted on an agency unique form prescribed by an agency supplement to the FAR may be submitted on a computer generated version of the form provided there is no change to the name, content, or sequence of the data elements on the form and provided the form carries the agency form number and edition date.

(i) If the Contractor submits a computer generated version of a form that is different than the required form, then the rights and obligations of the parties will be determined based on the content of the required form.

(End of clause)

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

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

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

(End of clause)

252.203-7001 PROHIBITION ON PERSONS CONVICTED OF FRAUD OR OTHER DEFENSE-CONTRACT-RELATED FELONIES (MAR 1999)

(a) Definitions. As used in this clause—

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

(i) Attempting to obtain;

(ii) Obtaining, or

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

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

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

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

(1) In a management or supervisory capacity on any DoD contract or first-tier subcontract;

(2) On the board of directors of any DoD contractor or first-tier subcontractor;

(3) As a consultant, agent, or representative for any DoD contractor or first-tier subcontractor; or

(4) In any other capacity with the authority to influence, advise, or control the decisions of any DoD contractor or subcontractor with regard to any DoD contract or first-tier subcontract.

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

(d) 10 U.S.C. 2408 provides that a defense contractor or first-tier subcontractor shall be subject to a criminal penalty of not more than $500,000 if convicted of knowingly—

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

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

(e) In addition to the criminal penalties contained in 10 U.S.C. 2408, the Government may consider other available remedies, such as—

(1) Suspension or debarment;

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

(3) Termination of the contract for default.

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

(1) The person involved;

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

(3) The reasons for the requested waiver; and

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

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

(h) Pursuant to 10 U.S.C. 2408(c), defense contractors and subcontractors may obtain information as to whether a particular person has been convicted of fraud or any other felony arising out of a contract with the DoD by contacting The Office of Justice Programs, The Denial of Federal Benefits Office, U.S. Department of Justice, telephone (202) 616-3507.

(End of clause)

252.203-7002 DISPLAY OF DOD HOTLINE POSTER (DEC 1991)

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

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

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

(End of clause)

252.204-7000 DISCLOSURE OF INFORMATION (DEC 1991)

(a) The Contractor shall not release to anyone outside the Contractor's organization any unclassified information, regardless of medium (e.g., film, tape, document), pertaining to any part of this contract or any program related to this contract, unless--

(1) The Contracting Officer has given prior written approval; or

(2) The information is otherwise in the public domain before the date of release.

(b) Requests for approval shall identify the specific information to be released, the medium to be used, and the purpose for the release. The Contractor shall submit its request to the Contracting Officer at least 45 days before the proposed date for release.

(c) The Contractor agrees to include a similar requirement in each subcontract under this contract. Subcontractors shall submit requests for authorization to release through the prime contractor to the Contracting Officer.

(End of clause)

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

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

(End of clause)

252.209-7000 ACQUISITION FROM SUBCONTRACTORS SUBJECT TO ONSITE INSPECTION UNDER THE INTERMEDIATE-RANGE NUCLEAR FORCES (INF) TREATY (NOV 1995)

(a) The Contractor shall not deny consideration for a subcontract award under this contract to a potential subcontractor subject to on-site inspection under the INF Treaty, or a similar treaty, solely or in part because of the actual or potential presence of Soviet inspectors at the subcontractor's facility, unless the decision is approved by the Contracting Officer.

(b) The Contractor shall incorporate this clause, including this paragraph (b), in all solicitations and contracts exceeding the simplified acquisition threshold in part 13 of the Federal Acquisition Regulation, except those for commercial items.

(End of clause)

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

(a) "Definitions."

As used in this provision --

(a) "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 indebtness 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 disclosure 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)

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

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

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

(End of clause)

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

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

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

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

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

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

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

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

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

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

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

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

(End of clause)

252.223-7004 DRUG-FREE WORK FORCE (SEP 1988)

(a) Definitions.

(1) "Employee in a sensitive position," as used in this clause, means an employee who has been granted access to classified information; or employees in other positions that the Contractor determines involve national security; health or safety, or functions other than the foregoing requiring a high degree of trust and confidence.

(2) "Illegal drugs," as used in this clause, means controlled substances included in Schedules I and II, as defined by section 802(6) of title 21 of the United States Code, the possession of which is unlawful under chapter 13 of that Title. The term "illegal drugs" does not mean the use of a controlled substance pursuant to a valid prescription or other uses authorized by law.

(b) The Contractor agrees to institute and maintain a program for achieving the objective of a drug-free work force. While this clause defines criteria for such a program, contractors are encouraged to implement alternative approaches comparable to the criteria in paragraph (c) that are designed to achieve the objectives of this clause.

(c) Contractor programs shall include the following, or appropriate alternatives:

(1) Employee assistance programs emphasizing high level direction, education, counseling, rehabilitation, and coordination with available community resources;

(2) Supervisory training to assist in identifying and addressing illegal drug use by Contractor employees;

(3) Provision for self-referrals as well as supervisory referrals to treatment with maximum respect for individual confidentiality consistent with safety and security issues;

(4) Provision for identifying illegal drug users, including testing on a controlled and carefully monitored basis. Employee drug testing programs shall be established taking account of the following:

(i) The Contractor shall establish a program that provides for testing for the use of illegal drugs by employees in sensitive positions. The extent of and criteria for such testing shall be determined by the Contractor based on considerations that include the nature of the work being performed under the contract, the employee's duties, and efficient use of Contractor resources, and the risks to health, safety, or national security that could result from the failure of an employee adequately to discharge his or her position.

(ii) In addition, the Contractor may establish a program for employee drug testing--

(A) When there is a reasonable suspicion that an employee uses illegal drugs; or

(B) When an employees has been involved in an accident or unsafe practice;

(C) As part of or as a follow-up to counseling or rehabilitation for illegal drug use;

(D) As part of a voluntary employee drug testing program.

(iii) The Contractor may establish a program to test applicants for employment for illegal drug use.

(iv) For the purpose of administering this clause, testing for illegal drugs may be limited to those substances for which testing is prescribed by section 2..1 of subpart B of the "Mandatory Guidelines for Federal Workplace Drug Testing Programs" (53 FR 11980 (April 11, 1988), issued by the Department of Health and Human Services.

(d) Contractors shall adopt appropriate personnel procedures to deal with employees who are found to be using drugs illegally. Contractors shall not allow any employee to remain on duty or perform in a sensitive position who is found to use illegal drugs until such times as the Contractor, in accordance with procedures established by the Contractor, determines that the employee may perform in such a position.

(e) The provisions of this clause pertaining to drug testing program shall not apply to the extent that are inconsistent with state or local law, or with an existing collective bargaining agreement; provided that with respect to the latter, the Contractor agrees those issues that are in conflict will be a subject of negotiation at the next collective bargaining session.

(End of clause)

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

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

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

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

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

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

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

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

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

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

(End of provision)

252.227-7033 RIGHTS IN SHOP DRAWINGS (APR 1966)

(a) Shop drawings for construction means drawings, submitted to the Government by the Construction Contractor, subcontractor or any lower-tier subcontractor pursuant to a construction contract, showing in detail (i) the proposed fabrication and assembly of structural elements and (ii) the installation (i.e., form, fit, and attachment details) of materials or equipment. The Government may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.

(b) This clause, including this paragraph (b), shall be included in all subcontracts hereunder at any tier.

252.231-7000 SUPPLEMENTAL COST PRINCIPLES (DEC 1991)

When the allowability of costs under this contract is determined in accordance with part 31 of the Federal Acquisition Regulation (FAR), allowability shall also be determined in accordance with part 231 of the Defense FAR Supplement, in effect on the date of this contract.

(End of clause)

252.236-7000 MODIFICATION PROPOSALS - PRICE BREAKDOWN. (DEC 1991)

(a) The Contractor shall furnish a price breakdown, itemized as required and within the time specified by the Contracting Officer, with any proposal for a contract modification.

(b) The price breakdown --

(1) Must include sufficient detail to permit an analysis of profit, and of all costs for --

(i) Material;

(ii) Labor;

(iii) Equipment;

(iv) Subcontracts; and

(v) Overhead; and

(2) Must cover all work involved in the modification, whether the work was deleted, added, or changed.

(c) The Contractor shall provide similar price breakdowns to support any amounts claimed for subcontracts.

(d) The Contractor's proposal shall include a justification for any time extension proposed.

252.236-7002 OBSTRUCTION OF NAVIGABLE WATERWAYS. (DEC 1991)

(a) The Contractor shall --

(1) Promptly recover and remove any material, plant, machinery, or appliance which the contractor loses, dumps, throws overboard, sinks, or misplaces, and which, in the opinion of the Contracting Officer, may be dangerous to or obstruct navigation;

(2) Give immediate notice, with description and locations of any such obstructions, to the Contracting Officer; and

(3) When required by the Contracting Officer, mark or buoy such obstructions until the same are removed.

(b) The Contracting Officer may --

(1) Remove the obstructions by contract or otherwise should the Contractor refuse, neglect, or delay compliance with paragraph (a) of this clause; and

(2) Deduct the cost of removal from any monies due or to become due to the Contractor; or

(3) Recover the cost of removal under the Contractor's bond.

(c) The Contractor's liability for the removal of a vessel wrecked or sunk without fault or negligence is limited to that provided in sections 15, 19, and 20 of the River and Harbor Act of March 3, 1899 (33 U.S.C. 410 et. seq.).

252.236-7004 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) 60% percent of the lump sum price upon completion of the contractor's mobilization at the work site.

(2) The remaining 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.

252.243-7001 PRICING OF CONTRACT MODIFICATIONS (DEC 1991)

When costs are a factor in any price adjustment under this contract, the contract cost principles and procedures in FAR part 31 and DFARS part 231, in effect on the date of this contract, apply.

252.243-7002 REQUESTS FOR EQUITABLE ADJUSTMENT (MAR 1998)

(a) The amount of any request for equitable adjustment to contract terms shall accurately reflect the contract adjustment for which the Contractor believes the Government is liable. The request shall include only costs for performing the change, and shall not include any costs that already have been reimbursed or that have been separately claimed. All indirect costs included in the request shall be properly allocable to the change in accordance with applicable acquisition regulations.

(b) In accordance with 10 U.S.C. 2410(a), any request for equitable adjustment to contract terms that exceeds the simplified acquisition threshold shall bear, at the time of submission, the following certificate executed by an individual authorized to certify the request on behalf of the Contractor:

I certify that the request is made in good faith, and that the supporting data are accurate and complete to the best of my knowledge and belief.

(Official's Name)

(Title)

(c) The certification in paragraph (b) of this clause requires full disclosure of all relevant facts, including--

(1) Cost or pricing data if required in accordance with subsection 15.403-4 of the Federal Acquisition Regulation (FAR); and

(2) Information other than cost or pricing data, in accordance with subsection 15.403-3 of the FAR, including actual cost data and data to support any estimated costs, even if cost or pricing data are not required.

(d) The certification requirement in paragraph (b) of this clause does not apply to----

(1) Requests for routine contract payments; for example, requests for payment for accepted supplies and services, routine vouchers under a cost-reimbursement type contract, or progress payment invoices; or

(2) Final adjustment under an incentive provision of the contract.

252.247-7023 TRANSPORTATION OF SUPPLIES BY SEA (MAY 2002)

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

(1) "Components" means articles, materials, and supplies incorporated directly into end products at any level of manufacture, fabrication, or assembly by the Contractor or any subcontractor.

(2) "Department of Defense" (DoD) means the Army, Navy, Air Force, Marine Corps, and defense agencies.

(3) "Foreign flag vessel" means any vessel that is not a U.S.-flag vessel.

(4) "Ocean transportation" means any transportation aboard a ship, vessel, boat, barge, or ferry through international waters.

(5) "Subcontractor" means a supplier, materialman, distributor, or vendor at any level below the prime contractor whose contractual obligation to perform results from, or is conditioned upon, award of the prime contract and who is performing any part of the work or other requirement of the prime contract.

(6) "Supplies" means all property, except land and interests in land, that is clearly identifiable for eventual use by or owned by the DoD at the time of transportation by sea.

(i) An item is clearly identifiable for eventual use by the DoD if, for example, the contract documentation contains a reference to a DoD contract number or a military destination.

(ii) "Supplies" includes (but is not limited to) public works; buildings and facilities; ships; floating equipment and vessels of every character, type, and description, with parts, subassemblies, accessories, and equipment; machine tools; material; equipment; stores of all kinds; end items; construction materials; and components of the foregoing.

(7) "U.S.-flag vessel" means a vessel of the United States or belonging to the United States, including any vessel registered or having national status under the laws of the United States.

(b)(1) The Contractor shall use U.S.-flag vessels when transporting any supplies by sea under this contract.

(2) A subcontractor transporting supplies by sea under this contract shall use U.S.-flag vessels if--

(i) This contract is a construction contract; or

(ii) The supplies being transported are--

(A) Noncommercial items; or

(B) Commercial items that--

(1) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it contracts for f.o.b. destination shipment);

(2) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(3) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

(c) The Contractor and its subcontractors may request that the Contracting Officer authorize shipment in foreign-flag vessels, or designate available U.S.-flag vessels, if the Contractor or a subcontractor believes that --

(1) U.S.-flag vessels are not available for timely shipment;

(2) The freight charges are inordinately excessive or unreasonable; or

(3) Freight charges are higher than charges to private persons for transportation of like goods.

(d) The Contractor must submit any request for use of other than U.S.-flag vessels in writing to the Contracting Officer at least 45 days prior to the sailing date necessary to meet its delivery schedules. The Contracting Officer will process requests submitted after such date(s) as expeditiously as possible, but the Contracting Officer's failure to grant approvals to meet the shipper's sailing date will not of itself constitute a compensable delay under this or any other clause of this contract. Requests shall contain at a minimum --

(1) Type, weight, and cube of cargo;

(2) Required shipping date;

(3) Special handling and discharge requirements;

(4) Loading and discharge points;

(5) Name of shipper and consignee;

(6) Prime contract number; and

(7) A documented description of efforts made to secure U.S.-flag vessels, including points of contact (with names and telephone numbers) with at least two U.S.-flag carriers contacted. Copies of telephone notes, telegraphic and facsimile message or letters will be sufficient for this purpose.

(e) The Contractor shall, within 30 days after each shipment covered by this clause, provide the Contracting Officer and the Maritime Administration, Office of Cargo Preference, U.S. Department of Transportation, 400 Seventh Street SW., Washington, DC 20590, one copy of the rated on board vessel operating carrier's ocean bill of lading, which shall contain the following information:

(1) Prime contract number;

(2) Name of vessel;

(3) Vessel flag of registry;

(4) Date of loading;

(5) Port of loading;

(6) Port of final discharge;

(7) Description of commodity;

(8) Gross weight in pounds and cubic feet if available;

(9) Total ocean freight in U.S. dollars; and

(10) Name of the steamship company.

(f) The Contractor shall provide with its final invoice under this contract a representation that to the best of its knowledge and belief--

(1) No ocean transportation was used in the performance of this contract;

(2) Ocean transportation was used and only U.S.-flag vessels were used for all ocean shipments under the contract;

(3) Ocean transportation was used, and the Contractor had the written consent of the Contracting Officer for all non-U.S.-flag ocean transportation; or

(4) Ocean transportation was used and some or all of the shipments were made on non-U.S.-flag vessels without the written consent of the Contracting Officer. The Contractor shall describe these shipments in the following format:

ITEM DESCRIPTION	CONTRACT LINE ITEMS	QUANTITY

_____
_____
_____
TOTAL_____

(g) If the final invoice does not include the required representation, the Government will reject and return it to the Contractor as an improper invoice for the purposes of the Prompt Payment clause of this contract. In the event there has been unauthorized use of non-U.S.-flag vessels in the performance of this contract, the Contracting Officer is entitled to equitably adjust the contract, based on the unauthorized use.

(h) In the award of subcontracts for the types of supplies described in paragraph (b)(2) of this clause, the Contractor shall flow down the requirements of this clause as follows:

(1) The Contractor shall insert the substance of this clause, including this paragraph (h), in subcontracts that exceed the simplified acquisition threshold in part 2 of the Federal Acquisition Regulation.

(2) The Contractor shall insert the substance of paragraphs (a) through (e) of this clause, and this paragraph (h), in subcontracts that are at or below the simplified acquisition threshold in part 2 of the Federal Acquisition Regulation.

(End of clause)

252.247-7024 NOTIFICATION OF TRANSPORTATION OF SUPPLIES BY SEA (MAR 2000)

(a) The Contractor has indicated by the response to the solicitation provision, Representation of Extent of Transportation by Sea, that it did not anticipate transporting by sea any supplies. If, however, after the award of this contract, the Contractor learns that supplies, as defined in the Transportation of Supplies by Sea clause of this contract, will be transported by sea, the Contractor --

(1) Shall notify the Contracting Officer of that fact; and

(2) Hereby agrees to comply with all the terms and conditions of the Transportation of Supplies by Sea clause of this contract.

(b) The Contractor shall include this clause; including this paragraph (b), revised as necessary to reflect the relationship of the contracting parties--

(1) In all subcontracts under this contract, if this contract is a construction contract; or

(2) If this contract is not a construction contract, in all subcontracts under this contract that are for--

(i) Noncommercial items; or

(ii) Commercial items that--

(A) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it subcontracts for f.o.b. destination shipment);

(B) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(C) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

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SC-1 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK

The Contractor shall be required to (1) commence work under this contract within 10 calendar days after the Contractor receives the notice to proceed, (2) prosecute the work diligently, and (3) complete the entire work specified for the Base Bid not later than 150 calendar days after the Contractor receives the notice to proceed.

Option 1: The Contracting Officer has the right to award Option 1 up to 130 days after the Contractor receives the notice to proceed for the base contract. The contract will be extended 60 calendar days if Option 1 is awarded and work shall be completed concurrently with the Base Bid work.

Options 2 and 3: The Contracting Officer has the right to award Options 2 and/or 3 up to 120 days after the Contractor receives the notice to proceed for the base contract. These options will not be awarded after beachfill is completed to the template shown on the drawings. If Options 2 and/or 3 are awarded the contract will be extended 10 calendar days for each option awarded.

Options 4 and 5: The Contracting Officer has the right to award Option 4 and/or 5 up to 200 days after the Contractor receives the notice to proceed for the base contract and only if Option 1 is awarded. These options will not be awarded after beachfill is completed to the template shown on the drawings. If Options 4 and/or 5 are awarded the contract will be extended 10 calendar days for each option awarded.

The time stated for completion shall include final cleanup of the premises. (CENAP)

SC-2 LIQUIDATED DAMAGES - CONSTRUCTION

a. If the Contractor fails to complete the work within the time specified in the contract, or any extensions thereof, the Contractor shall pay to the Government as liquidated damages, the sum of $1,650 for each calendar 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)

SC-3 CONTINUING CONTRACTS (MARCH 1995 EFARS)

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 to Contractor" clause or any other clause of this contract.

b. The sum of $3,500,000 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 therefore.

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. (EFAR 52.232-5000)

SC-4 CONTRACT DRAWINGS, MAPS AND SPECIFICATIONS

a. Upon obtaining the plans and specifications, the Contractor shall:

(1) Immediately check the specifications and all drawings;
(2) Compare the specifications and 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).

b. Large scale drawings shall, in general, govern small scale drawings. Figures marked on drawings shall, in general, be followed in preference to scale measurements.

c. 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.

d. The work shall conform to the specifications and the contract drawings identified on the following, all of which are available in the office of the District Engineer, U.S. Army Engineer District, Philadelphia, Room 643, Wanamaker Building, 100 Penn Square East, Philadelphia, PA 19107. Drawings are titled: "Beach Nourishment, Cape May Inlet to Lower Township and Lower Cape May Meadows - Cape May Point, Cape May, New Jersey", and have the following drawing numbers, subtitles, and dates as shown on Drawing No. 62321, titled " General Plan and List of Drawings.

SC-5 PHYSICAL DATA (APR 1984)

Data and information furnished or referred to below is for the Contractor's information. The Government shall not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor. (FAR 52.236-4)

a. The indications of physical conditions on the drawings and in the specifications are the result of site investigations by surveys. Samples of materials to be dredged for beachfill were obtained by using split-spoon and vibracore samplers and are included in Section 00855 of this contract and on the contract drawings. This information is considered representative of the materials to be found in the borrow area.

b. Tide Data. The mean and spring ranges of tides in the vicinity of the work are 4.3 feet and 5.2 feet, respectively. Mean low water is approximately -2.8 feet North American Vertical Datum (NAVD 88).

c. Weather Conditions. The site of the work is in the open ocean and is exposed to storms. However, safe refuge from the ocean is available in Cape May Harbor which is immediately adjacent to the work site. It is believed that work can be performed during all seasons of the year except during winter months when ice and storm conditions may interfere with dredging

operations. The Contractor shall satisfy himself as to the hazards likely to arise from weather conditions during the construction period.

d. Channel Traffic. Traffic in the work area consists of ocean going and commercial fishing and sport fishing vessels, U.S. Coast Guard vessels, and recreational craft.

e. Obstruction of the Channel. The Government will not undertake to keep channels free from vessels or other obstructions, except to the extent of such regulations if any, as may be prescribed by the Secretary of the Army, in accordance with the provisions of Section 7 of the River and Harbor Act approved 8 August 1917. The Contractor will be required to conduct the work in such manner as to obstruct navigation as little as possible, and in case the Contractor's plant so obstructs a channel as to make difficult or endanger the passage of vessels, said plant shall be promptly moved on the approach of any vessel to such an extent as may be necessary to afford a practicable passage. The Contractor shall request the U.S. Coast Guard to issue a Notice to Mariners advising navigation interests that the Contractor's dredging plant will be operating in the area. The Contractor shall submit a request to the Commander (OAN), Fifth Coast Guard District, 431 Crawford Street, Portsmouth, Virginia 23704. The Contractor shall furnish a copy of this request to the Contracting Officer not less than five days prior to the start of dredging. The Contractor shall also notify the U.S. Coast Guard of the approximate time required for completion of the dredging. Upon completion of the work, the Contractor shall promptly remove his plant, including ranges, buoys, and other marks placed by him under this contract in navigable waters and on the shore.

f. Navigation Aids. The Contractor shall not relocate or move any aids to navigation that have been established by the U.S. Coast Guard. If it becomes necessary to have any aids to navigation moved, the Contractor shall notify the U.S. Coast Guard at least 15 days prior to the desired date for movement of the aid. All requests shall be made in writing to: Commander (OAN), Fifth Coast Guard District, 431 Crawford Street, Portsmouth, Virginia 23704. A copy of each request shall be furnished to the Contracting Officer.

g. Transportation Facilities. The work site is accessible from the New Jersey Garden State Parkway and U.S. Route 9. The Contractor shall be responsible for all investigations of load carrying capacities of bridges and roadways.

h. Location. The City of Cape May, Cape May Meadows and Cape May Point are located on the Atlantic Ocean coast of New Jersey in southern Cape May County.

i. Laying of Submerged Pipelines. If it becomes necessary in the performance of this contract to use a submerged pipeline, the Contractor shall notify the Contracting Officer in advance of the schedule for placement of the pipeline. If the submerged line is to be placed across a navigable channel, the Contractor shall submit a request for approval, at least ten working days (Saturdays and Sundays excluded) prior to the desired closure date, to the U.S. Coast Guard, MSO/Group Philadelphia, 1 Washington Avenue, Philadelphia, PA 19147-4395. A copy of this request shall be furnished to the Contracting Officer. This request shall contain the following information:

(1) Location (channel centerline stationing) and depth over the top of the pipeline at which the submerged line will be placed;

(2) The desired length of time the channel is to be closed;

(3) The date and hour placement or removal will commence;

(4) The date and hour of anticipated completion; and

(5) The name and telephone number of the person to be contacted for information and response to any emergency condition.

The Coast Guard has indicated that the requirements of navigation may make it necessary to establish times other than those requested. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE HIS PLANS WITH THE COAST GUARD SUFFICIENTLY IN ADVANCE OF THE PLANNED CLOSING TO PREVENT DELAY TO THE DREDGING OPERATIONS AND COMPLY WITH THE COAST GUARD REQUIREMENTS.

j. Bridge to Bridge Radio Telephone Equipment. All dredges engaged in work under this contract shall be equipped with and operate bridge-to-bridge radio telephone equipment so that communication may be made with passing vessels. The radio telephone equipment shall operate on VHF Channel 13 (156.65 MHz) with low power output having a communication range of approximately ten miles. The frequency has been approved by the Federal Communications Commission.

k. Survey control description sheets are included as Section 00845 of this contract.

l. Magnitude of Contract. The estimated amount of the contract work is over $10,000,000.

m. The Cape May Inlet to Lower Township, New Jersey, Phase II, General Design Memorandum, dated August 1983 and the Lower Cape May Meadows-Cape May Point Feasibility Study, Dated August 1998 are available for inspection in the Philadelphia District Office, Wanamaker Building, 100 Penn Square East, Philadelphia, PA. Arrangements for inspection of these documents shall be made by contacting Mrs. Monica Chasten, Civil Works Project Management Branch, telephone number (215) 656-6683.

SC-6 DAMAGE TO WORK

The responsibility for damage to any part of the permanent work shall be as set forth in the clause of the contract 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 or hurricane, 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 shall 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, and equitable adjustment pursuant to 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, damages 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. (CENAP)

SC-7 LAYOUT OF WORK (APR 1984)

The Contractor shall lay out its work from Government-provided channel coordinates, furnished as part of each work assignment. The Contractor shall furnish, at its own expense, such stakes, templates, platforms, equipment, range markers and labor as may be required in laying out any part of the work, from the channel coordinates furnished by the Government. The Contractor shall be responsible for executing the work to such lines and grades. The Contractor must have real time differential GPS positioning in accordance with the Corps survey manual, class 1 survey requirements for dredge positioning. The Contractor shall provide real time positioning on a computer screen during dredging, and have the capability of playback in 15 minute intervals. The position must be recorded on disk every 15 minutes and submitted to the Contracting Officer on a monthly basis.(CENAP)

SC-8 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 fifty (50) 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)

SC-9 ENVIRONMENTAL LITIGATION (1974 NOV OCE)

a. If the performance of all or any part of the work is suspended, delayed, or interrupted due to an order of a court of competent jurisdiction as a result of environmental litigation, as defined below, the Contracting Officer, at the request of the Contractor, shall determine whether the order is due in any part to the acts or omissions of the Contractor or a Subcontractor at any tier not required by the terms of the contract. If it is determined that the order is not due in any part to acts or omissions of the Contractor or a Subcontractor at any tier other than as required by the terms of this contract, such suspension, delay, or interruption shall be considered as if ordered by the Contracting Officer in the administration of this contract under the terms of the SUSPENSION OF WORK clause of this contract. The period of such suspension, delay, or interruption shall be considered unreasonable, and an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) as provided in that clause, subject to all the provisions thereof.

b. The term "environmental litigation", as used herein, means a lawsuit alleging that the work will have an adverse effect on the environment or that the Contractor has not duly considered, either substantively or procedurally, the effect of the work on the environment. (CENAP)

SC-10 QUANTITY SURVEYS

a. Quantity surveys shall be conducted, and the data derived from these surveys shall be used in computing the quantities of work performed and the actual construction completed and in place.

b. The Contractor shall conduct the original and final surveys and make the computations based on them. The Contractor shall conduct the surveys for any periods for which progress payments are requested and shall make the computations based on these surveys. All surveys conducted by the

Contractor shall be conducted under the direction of a representative of the Contracting Officer, unless the Contracting Officer waives this requirement in a specific instance. All surveys shall be conducted in accordance with Section 01720 SURVEY REQUIREMENTS of these specifications.

c. Promptly upon completing a survey, the Contractor shall furnish the required submittals (per Section 01720 SURVEY REQUIREMENTS), 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. The Contracting Officer 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)

SC-11 SIGNAL LIGHTS

The Contractor shall display signal lights and conduct his operations in accordance with the General Regulations of the Coast Guard governing lights and day signals to be displayed by towing vessels with tows on which no signals can be displayed, vessels working on wrecks, dredges, and vessels engaged in laying cables or pipe or in submarine or bank protection operations, lights to be displayed on dredge pipe lines, and day signals to be displayed by vessels of more than 65 feet in length moored or anchored in a fairway or channel, and the passing by other vessels of floating plant working navigable channels, as approved by the Commandant, U.S. Coast Guard with respect to vessels in inland waters (33 CFR 84 and 33 CFR 88), as applicable. (CENAP)

SC-12 INSPECTION

The inspectors will monitor the maintenance of the gauges, ranges, location marks and limit marks in proper order and position; but the presence of the inspector shall not relieve the Contractor of responsibility for the proper execution of the work in accordance with the specifications. The Contractor will be required:

a. To furnish, on the request of the Contracting Officer or any inspector, the use of such boats, boatmen, laborers, a part of the ordinary and usual equipment and crew of the dredging plant as may be reasonably necessary in supervising the work.

b. To furnish, on the request of the Contracting Officer or any inspector, suitable transportation from all points on shore designated by the Contracting Officer to and from the various pieces of plant and to and from the borrow areas. Should the Contractor refuse, neglect, or delay compliance with these requirements, the specific facilities may be furnished and maintained by the Contracting Officer, and the cost thereof will be deducted from any amounts due or to become due the Contractor. (CENAP)

SC-13 ACCOMMODATIONS AND MEALS FOR GOVERNMENT INSPECTORS (1965 APR OCE)

a. The Contractor shall furnish regularly to Government inspectors on board the dredge or other craft upon which they are employed a suitable separate room for use as an office. The room shall be fully equipped and maintained to the satisfaction of the Contracting Officer; it shall be properly heated, ventilated and lighted, and shall have a desk which can be locked, and a chair for each inspector, and washing conveniences. The entire cost to the Contractor for furnishing, equipping and maintaining the foregoing accommodations shall be included in the contract price. If the Contractor

fails to meet these requirements, the facilities referred to above will be secured by the Contracting Officer, and the cost thereof will be deducted from payments to the Contractor.

b. If the Contractor maintains on this work an establishment for the subsistence of his own employees, he shall, when requested, furnish to inspectors employed on the work, and to all Government agents who may visit the work on official business, meals of a quality satisfactory to the Contracting Officer. The meals furnished will be paid for the Government at a rate of $5.00 per person for each meal. (CENAP)

SC-14 EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE (May 1995)

a. This clause does not apply to terminations. See 52.249-5000, Basis for Settlement of Proposals, and FAR Part 49.

b. Allowable cost for construction and marine plant and equipment in sound workable condition owned or controlled and furnished by the Contractor or sub-contractor at any tier shall be based on actual cost data for each piece of equipment or groups of similar serial or 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," Regions I. 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)(ii) and FAR 31.205-36. Rates for equipment rented from an organization under common control, lease-purchase arrangements, and sale-leaseback arrangements, will be determined using the schedule, except that actual rates will be used for equipment leased from an organization under common control that has an established practice of leasing the same or similar equipment to unaffiliated lessees.

d. When actual equipment costs are proposed and the total amount of the pricing action exceeds the small purchase threshold, the Contracting Officer shall request the Contractor to submit either certified cost or pricing data, or partial/limited data, as appropriate. (EFARS 52.231-5000)

Note #1: The small purchase threshold is $100,000.

Note #2: By submitting cost or pricing data, the Contractor grants to the Contracting Officer (or authorized representative) the right to examine those books, records, documents, and/or other supporting data that will permit evaluation of the proposed equipment costs. This right shall extend for 2 years after expiration of contract performance. After price agreement, the Contractor shall certify that the equipment cost or pricing data submitted are accurate, complete and current.

SC-15 PERFORMANCE EVALUATION OF CONTRACTOR (1985 JAN HQ USACE)

a. As a minimum, the Contractor's performance will be evaluated upon final acceptance of the work. However, interim evaluation may be prepared at any time during contract performance when determined to be in the best interest of the Government.

b. The format for the evaluation will be DD Form 2626, and the Contractor will be rated either outstanding, satisfactory, or unsatisfactory in the areas of Contractor Quality Control, Timely Performance, Effectiveness of Management, Compliance with Labor Standards, and Compliance with Safety Standards. The Contractor will be advised of any unsatisfactory rating, either in an individual element or in the overall rating, prior to completing the evaluation, and all Contractor comments will be made a part of the official record. Performance Evaluation Reports will be available to all DOD Contracting offices for their future use in determining Contractor responsibility, in compliance with DFARS 36.201(c)(1). (CENAP)

SC-16 CERF IMPLEMENTATION (1983 JUN OCE)

If the work specified in this contract is performed by a hopper dredge(s), the owner must have an active Basic Ordering Agreement (BOA) for the hopper dredge(s) on file with the Corps. The Contractor shall be obligated to make the hopper dredge(s) available to serve in the Corps of Engineers Reserve Fleet (CERF) at any time that the hopper dredge(s) is performing work under this contract. When the Contracting Officer is notified of the decision to activate this dredge(s) into the CERF, he shall take appropriate action to release the dredge(s). He may then extend or terminate the contract to implement whichever action is in the best interest of the Government. The CERF Contractor shall also be subject to the following conditions:

a. The Director of Civil Works may require the Contractor to perform emergency dredging at another CONUS (48 contiguous states) site for a period of time equal to the remaining time under this contract at the date of notification plus up to ninety (90) days at the previously negotiated rate which appears on the schedule of prices in the BOA.

b. The Chief of Engineers may require the Contractor to perform emergency dredging at an OCONUS (Outside CONUS which includes Alaska, Hawaii, Puerto Rico, the Virgin Islands, or U.S. Trust Territories) site for a period of time equal to the time remaining under this contract at the date of notification plus up to one hundred eighty (180) days at the negotiated rate which appears on the schedule of prices in the BOA.

c. The CERF shall be activated by the Chief of Engineers or the Director of Civil Works; then the Ordering Contracting Officer will notify the Contractor. From the time of notification, the selected hopper dredge(s) must depart for the emergency assignment within seventy-two (72) hours for CONUS or ten (10) days for OCONUS assignments.

d. A confirming delivery order will be issued pursuant to the Basic Ordering Agreement (BOA) by the Ordering Contracting Officer. Such delivery order shall utilize the schedule of rates in the BOA for the specific hopper dredge(s).

e. If during the time period specified in a, b, or c, a CERF vessel(s) is still required, the contract performance may be continued for additional time by mutual agreement. (CENAP)

SC-17 INSURANCE REQUIREMENTS

Evidence of the following types of insurance shall be provided to the Contracting Officer prior to commencement of work and shall be maintained throughout the period of performance. (Contractor shall co-insure the State of New Jersey and the City of Cape May under General Liability Insurance, as in below paragraph "a".

a. General Liability Insurance (Comprehensive form of policy): Bodily Injury Liability - $500,000 per occurrence.

b. Automobile Liability Insurance (Comprehensive form of policy): Bodily Injury Liability - $200,000 per person and $500,000 per accident. Property Damage Liability - $20,000 per accident.

c. Workmen's Compensation and Employer's Liability Insurance: Compliance with applicable workmen's compensation and occupational disease statutes is required. Employer's liability coverage in the minimum amount of $100,000 is also required."

d. Applicable Marine Casualty and Marine Workmen's Compensation Insurance: As appropriate for this contract.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section --

SECTION 00805-1

CONTRACT ADMINISTRATION DATA

G.1 ACCOUNTING AND APPROPRIATION DATA:
TO BE FURNISHED AT TIME OF AWARD

G.2 CONTRACT ADMINISTRATION IS RETAINED BY THE CONTRACTING OFFICER:

US Army Engineer District, Philadelphia
ATTN: CENAP-CT-C (Michelle Bertoline)
Wanamaker Building, 100 Penn Square East
Philadelphia, Pennsylvania 19107-3390
(215) 656-6914

G.3 PAYMENT BY:

US Army Corps of Engineers
FINANCE CENTER
5720 Integrity Drive
Millington, Tennessee 38054-5005

G.4 BILLING ADDRESS:

Invoices shall be forwarded as follows:

US Army Corps of Engineers, PHILADELPHIA
ATTN: CENAP-EN-C
WANAMAKER BUILDING, 100 PENN SQUARE EAST
PHILADELPHIA, PENNSYLVANIA 19107-3390

G.5 TECHNICAL INQUIRIES:
All technical inquiries should be directed to:

(215) 656-6683 or (215) 656-6579 (Pre-Award)
(215) 656-6625 (Post-Award)

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BUILDING, HEAVY, HIGHWAY WAGE RATE:

General Decision Number NJ020002
Superseded General Decision No. NJ010002
State: New Jersey

Construction Type:
BUILDING
HEAVY
HIGHWAY

County(ies):

ATLANTIC	CUMBERLAND	OCEAN
BURLINGTON	GLOUCESTER	SALEM
CAMDEN	MERCER	
CAPE MAY	MONMOUTH	

Building (excluding single family homes and apartments up to and including 4 stories), Heavy (does not include the counties of BURLINGTON, CAMDEN, GLOUCESTER, AND SALEM) Highway Construction Projects.

Modification Number	Publication Date
0	03/01/2002
1	03/08/2002
2	03/15/2002
3	04/19/2002
4	04/26/2002
5	05/03/2002
6	05/10/2002
7	06/07/2002
8	07/05/2002

COUNTY(ies):

ATLANTIC	CUMBERLAND	OCEAN
BURLINGTON	GLOUCESTER	SALEM
CAMDEN	MERCER	
CAPE MAY	MONMOUTH	

ASBE0014C 05/01/2000

	Rates	Fringes
BURLINGTON (townships of Edgewater Park,Lumberton,Sampton, Shamong,Tabermacle,Westhampton,&Willingboro), CAMDEN, & GLOUCESTER COUNTIES:		
ASBESTOS WORKERS/INSULATORS (includes the application of all insulating materials, protective coverings,coatings, and finishes to all types of mechanical systems. Also the application of firestopping material, openings and penetrations in walls, floors, ceilings, curtain walls and all lead abatement).	28.12	13.74

ASBE0042B 07/15/1999

	Rates	Fringes
SALEM COUNTY:		
ASBESTOS WORKERS	23.99	9.89

ASBE0085A 06/01/1994

	Rates	Fringes
ASBESTOS WORKERS/INSULATORS Includes the application of all insulating materials, protective coverings, coatings, and finishes to all types of mechanical systems		
ZONE 1	20.20	6.35
ZONE 2	18.30	6.825

ASBESTOS WORKERS ZONE DEFINITIONS
ZONE 1: ATLANTIC, BURLINGTON (Bass River and Washington Twps.); CAPE MAY, CUMBERLAND AND OCEAN (Eaglewood, Lacy, Little Egg Harbor, Long Beach, Ocean, Stafford, Tuckerton, and Union Twps.) COUNTIES.
ZONE 2: MONMOUTH (Remainder of County)

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* ASBE0089G 07/01/2002

	Rates	Fringes
BURLINGTON (includes the townships of Bordentown, Burlington, Chesterfield, Easthampton, Florence, Mansfield, Mount Holly, New Hanover, North Hanover, Pembereton, Roebling, Springfield, Wrightstown, & Woodland); MERCER COUNTY; MONMOUTH (includes the townships of Allentown, Blansingburg, Brielle, Englishtown, Farmingdale, Freehold, Howell, Manasquan, Millstone, Roosevelt, Sea Crit, South Belmar, Spring Lake Heights, Upper Freehold, Wall, & West Belmar); & OCEAN (includes the townships of Beachwood, Berkeley, Breton Woods, Brick, Cederwood Park, Dover, Gillford Park, Island Beach, Island Heights, Jackson, Lakehurst, Lakewood, Manchester, New Egypt, Ocean Gate, Pine Beach, Plumstead, South Toms River & Toms River) COUNTIES:		
ASBESTOS WORKERS/INSULATORS Includes the application of all insulating materials, protective coverings, coatings, and finishes to all types of mechanical systems	29.78	15.97

BOIL0028C 01/01/2002

	Rates	Fringes
BOILERMAKERS	32.03	44%+4.61

BRNJ0005A 11/01/2000

	Rates	Fringes
BRICKLAYERS, STONEMASONS, MARBLE MASONS, CEMENT MASONS, (Excludes Building Construction for Mercer County), PLASTERERS, TILE LAYERS, & TERRAZZO WORKERS	27.85	12.70

CARP0031B 05/01/2002

	Rates	Fringes
MERCER COUNTY (Remainder)		
CARPENTERS & INSULATORS	30.00	12.90
MILLWRIGHTS	30.00	12.90

CARP0454B 07/01/2001

	Rates	Fringes
DOCK BUILDERS & PILEDRIVERMEN	27.45	16.79+A

FOOTNOTE:
A. PAID HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Veteran's Day, Presidential Election Day, and Thanksgiving Day; provided employee works any of the 3 days in the 5-day work week preceeding the holiday and the first work day after the holiday.

CARP0623A 05/01/2002

	Rates	Fringes
ATLANTIC, BURLINGTON, CAMDEN, CAPE MAY, CUMBERLAND, GLOUCESTER AND SALEM COUNTIES		
CARPENTERS, INSULATORS, MILLWRIGHTS AND SOFT FLOOR LAYERS	30.00	12.90

CARP0781A 05/01/2002

	Rates	Fringes
MERCER COUNTY (Beginning from the present Post Office in Lawrenceville to a point Northward through the present "Radio Site" to the junction of Rosedale Road and Read's Mill Road to the junction of Pennington and Mount Rose Road to the Somerset County line, again starting at the present Post Office in Lawrenceville and Eastward to the junction of Brunswick Pike and Delaware and Raritan Canal Bridge taking the center of the Road to CLarksville then South on Providence Line Road to the Pennsylvania Railroad then East on Dutch Neck North to Grover's Mills to the Middlesex County Line)		
CARPENTERS	30.00	12.90
MILLWRIGHTS	30.00	12.90

CARP0999B 12/03/1994

	Rates	Fringes
CAMDEN, GLOUCESTER AND SALEM COUNTIES		
TERRAZZO FINISHERS	12.93	5.05

CARP0999C 12/03/1994

	Rates	Fringes
ATLANTIC AND MONMOUTH COUNTIES:		
TILE FINISHERS	8.45	13%

CARP0999D 12/03/1994

	Rates	Fringes
CAMDEN, GLOUCESTER AND SALEM COUNTIES		
TILE FINISHERS	12.72	5.05

CARP0999E 12/03/1994

	Rates	Fringes
CAMDEN, GLOUCESTER AND SALEM COUNTIES		
MARBLE FINISHERS	12.95	5.05

CARP1456G 05/01/2001

	Rates	Fringes
DIVERS	37.13	23.56
DIVER TENDERS	27.67	23.56

CARP1456H 05/01/2001

	Rates	Fringes
MERCER AND MONMOUTH COUNTIES		
DOCK BUILDERS & PILEDRIVERMEN	30.39	23.56

CARP2018A 05/01/2002

	Rates	Fringes
OCEAN COUNTY		
CARPENTERS	30.00	12.90
MILLWRIGHTS	30.00	12.90

CARP2212B 05/01/2002

	Rates	Fringes
BURLINGTON, MERCER, MONMOUTH AND OCEAN COUNTIES		
SOFT FLOOR LAYERS	30.00	12.90

CARP2250A 05/01/2002

	Rates	Fringes
MONMOUTH COUNTY		
CARPENTERS	30.00	12.90
MILLWRIGHTS	30.00	12.90

ELEC0269D 10/01/2000

	Rates	Fringes
BURLINGTON (Area North of a line following the West and South limits of Burlington Borough from the Delaware River in a Southeasterly direction to the Burlington - Mt Holly Road, South-Southeast along this Road to and including the Town of Mount Holly, East along the Pennsylvania Railroad to and including New Lisbon and continuing along the Pennsylvania Railroad to Ocean County Line), AND MERCER COUNTIES		
LINE CONSTRUCTION (EXCEPT RAILROAD WORK):		
Linemen, Cable Splicers, Equipment Operators and Technicians	33.08	6.25+29%
Truck Drivers, Groundmen and Winch Operators	26.46	6.25+29%

ELEC0269E 04/01/2002

	Rates	Fringes
BURLINGTON COUNTY (Area North of a line following the West and South limits of Burlington Borough from the Delaware River in a Southeasterly direction to the Burlington - Mount Holly Road, South-Southeast along this road to and including the Town of Mount Holly, East along the Pennsylvania Railroad to and including New Lisbon and continuiong along the Pennsylvania Railroad to the Ocean County Line) AND MERCER COUNTIES		
ELECTRICIANS & CABLE SPLICERS	34.84	47.3%+.25

ELEC0351A 10/01/2001

	Rates	Fringes
ATLANTIC; BURLINGTON (Edgewater park, Delanco, Delran, Cinnaminson,Moorestown, Mount Laurel, Wilingsboro, Hainesport, Lumberton,Medford, Evesham Townships; and the portion of Shamong, Tabernacle, and Woodland Townships North of the Central Railroad of New Jersey Line; and the portion of Burlington, Westhampton, Easthampton, South Hampton and Pemberton Townships South of a line starting at the Delaware River and following the Southern		

boundary of Burlington Borough to the Burlington - Mount Holly Road, along this road to Mount Holly around but excluding Mount Holly to the Pennsylvania Railroad along the Pennsylvania Line through, but excluding, Pemberton, through but excluding New Lisbon to the Ocean County line and that portion south of the Central Railroad of New Jersey line running through Chatsworth); CAMDEN; CAPE MAY; CUMBERLAND; GLOUCESTER; and SALEM COUNTIES:

ELECTRICIANS & CABLE SPLICERS	32.89	51.05%+.20

ELEC0351C 10/01/2001

	Rates	Fringes
ATLANTIC; BURLINGTON (Edgewater park, Delanco, Delran, Cinnaminson,Moorestown, Mount Laurel, Wilingsboro, Hainesport, Lumberton,Medford, Evesham Townships; and the portion of Shamong, Tabernacle, and Woodland Townships North of the Central Railroad of New Jersey Line; and the portion of Burlington, Westhampton, Easthampton, South Hampton and Pemberton Townships South of a line starting at the Delaware River and following the Southern boundary of Burlington Borough to the Burlington - Mount Holly Road, along this road to Mount Holly around but excluding Mount Holly to the Pennsylvania Railroad along the Pennsylvania Line through, but excluding, Pemberton, through but excluding New Lisbon to the Ocean County line and that portion south of the Central Railroad of New Jersey line running through Chatsworth); CAMDEN; CAPE MAY; CUMBERLAND; GLOUCESTER; and SALEM COUNTIES:		
LINEMAN,HEAVY EQUIPMENT OPERATOR,& CABLE SPLICERS	32.89	52.05%
GROUNDMAN	27.95	52.05%

ELEC0400A 06/03/2002

	Rates	Fringes
MONMOUTH AND OCEAN COUNTIES		
ELECTRICIANS & CABLE SPLICERS	36.01	40.75%

ELEC0400B 06/02/1997

	Rates	Fringes
MONMOUTH AND OCEAN COUNTIES		
LINE CONSTRUCTION (Excluding Railroad construction):		
Lineman, Equipment Operator, and Cable Splicer	28.96	18.75%+5.83
Groundman	27.01	18.75%+5.83

ELEC0999A 12/03/1994

	Rates	Fringes
BURLINGTON, CAMDEN, CAPE MAY, CUMBERLAND, GLOUCESTER, MONMOUTH, OCEAN AND SALEM COUNTIES:		
LINE CONSTRUCTION (RAILROAD ONLY):		
Linemen	16.96	25%
Line Equipment Operator	16.20	25%
Groundman Winch Operator	13.07	25%
Groundman	11.06	25%
Dynamite Man	14.20	25%
Street Light Mechanic	12.97	25%
Line Equipment Mechanic	12.90	25%

ELEV0005C 06/19/2000

	Rates	Fringes
ELEVATOR MECHANICS	33.395	6.935+A

FOOTNOTE:

A. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day
PAID VACATION: Employer contributes 4% of basic hourly rate as vacation pay credit for 5 years or more of service, and 2% for 6 months to 5 years of service.

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* ENGI0825B 07/01/2002

	Rates	Fringes
POWER EQUIPMENT OPERATORS:		
BUILDING CONSTRUCTION PROJECTS; HEAVY;		
HIGHWAY; ROAD; STREET AND SEWER PROJECTS:		
GROUP 1	32.87	17.15+A+B
GROUP 2	31.28	17.15+A+B
GROUP 3	29.37	17.15+A+B
GROUP 4	27.74	17.15+A+B
GROUP 5	26.03	17.15+A+B
GROUP 6	34.59	17.15+A+B

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Autograde - Combination Subgrader; base metal spreader and 7 base trimmer (CMI and similar types); autograde placer, trimmer, spreader combination (CMI and similar types); autograde slipform paver (CMI and similar types); backhoe; central power plants (all types); concrete paving machines; cranes (all types, including overhead and straddle traveling type); cranes; gantry; derricks (land or floating); drillmaster, quarrymaster (down the hole drill) rotary drill; self propelled hydraulic drill; self-powered drill; dragline; elevator graders; front end laoders (5 yds. and over); gradalls; grader; raygo; locomotive (large); mucking machines; pavement and concrete breaker, i.e.; superhammer and hoe ram; pile driver; length of boom including length of leads, shall determine premium rate applicable; roadway surface grinder; scooper (loader and shovel); shovels; tree chopper with boom; trench machines.

GROUP 2: "A" frame; backhoe (combination); boom attachment on loaders (rate based on size of bucket) not applicable to pipehook, boring and drilling machines; brush chopper; shredder and tree shredder; tree shearer; cableways; carryalls; concrete pump; concrete pumping system; pumpcrete and similar types; conveyors, 125 ft. and over; drill doctor including dust collector, maintenance); front end loaders (2 yds. but less than 5 yds.); graders (finisher); groove cutting machine (ride on type); header planer; hoists; (all types hoists, shall also include steam, gas, diesel, electric, air hydraulic, single and double drum, concrete brick shaf't caisson, snorkel roof, and/or any other similar type hoisting machines, portable or stationary, except Chicago boom type); hoists (Chicago boom type); hydraulic cranes, 10 tons and under, hydro-axle; jacks screw air hydraulic power operated unit or console type (not hand jack or pile load test type); log skidder; pans; pavers (all concrete; pumpcrete machines; squeezecrete and concrete pumping (regardless of size); scrapers; side booms; straddle carrier; ross and similar types; winch truck (hoisting).

GROUP 3: Asphalt curbing machine; asphalt plant engineer;

asphalt spreader; autograder tube finisher and texturing machine (CMI and similar types); autograde curercrete machine (CMI and similar types); autograde curb trimmer and sidewalk; shoulder; slipform (CMI and similar types); bar bending machines (power); batchers; batching plant and crusher on side; belt conveyor systems; boom type skimmer machines, bridge deck finisher; bulldozers (all); car dumpers (railroad); compressor and blower type units (used independently or mounted on dual purposes trucks, on job site or in conjunction with job site in loading and unloading of concrete, cement, fly ash, instancrete, or similar type materials); compressor (2 or 3) (battery); concrete finishing machines; concrete saws and cutters (ride on type); concrete spreaders; hetzel; rexomatic and similar types; concrete vibrators, conveyors; under 125 ft.; crushing machines; ditching machine; small (ditchwitch or similar type); dope pots (mechanical with or without pump); dumpsters elevator; fireman; fork lifts (economobile; lull and similar types of equipment); front end loaders (1 yd. and over but less than 2 yds.). generators (2 OR 3) in battery; giraffe grinders; graders and motor patrols; gunnite machines (excluding nozzle); hammer vibratory (in conjunction with generator); hoist (roof, tugger, aerial platform hoist and house cars); hoppers; hopper doors (power operated); ladders (motorized); laddervator; locomotive; dinky type; maintenance; utility man; mechanics; mixers (except paving mixers); motor patrols and graders; pavement breakers, small; self-propelled ride on type (also maintaining compressor or hydraulic unit); pavement breaker; truck mounted; pipe bending machine (power); roller; black top; scales; power; seaman pulverizing mixer; shoulder widener; silos; skimmer machines (boom type); steel cutting machine; services and maintaining tractors; tug captain; vibrating plants (used in conjunction with unloading); welder and repair mechanics, concrete cleaning/ decontamination machine operator, directional boring machine, heavy equipment robotics operator/technician, master environmental maintenance technician, ultra high pressure waterjet cutting tool system operator/maintenance technician, vacuum blasting machine operator/maintenance technician.
GROUP 4: Brooms and sweepers, chippers, compressor (single), concrete spreaders (small type), conveyor loaders (not including elevator graders), engines, large diesel (1620 H.P.) and staging pump, farm tractors; fertilizing equipment (operation and maintenance) fine grade machine (small type); form line graders (small type); front loader (under 1 yd.); generator (single); grease, gas, fuel and oil supply trucks; heaters (nelson or other type including propane, natural gas or flow-type units); lights; portable generating light plants; mixers; concrete small; mulching equipment (operation and maintenance) pumps (4 inch suction and over including sumbersible pumps); pumps (2 or less than 4" suction and over including submersible pumps); pumps (diesel engine and hydraulic) immaterial of power road finishing machines (small type); rollers; grade; fill or stone base; seeding equipment (operation and maintenance of); sprinkler and water pump trucks steam jennies and boilers, stone spreader; tamping machines; vibrating ride-on; temporary heating plant (nelson or other type, including propane, natural gas or flow type untis); water and sprinkler trucks; welding machines (gas, diesel, and/or electric converters of Any type, single; two or

three in a battery); welding systems, multiple (rectifier transformer type); wellpoint systems.
GROUP 5: Oiler.
GORUP 6: Helicopter Pilot.
FOOTNOTES:
A. PAID HOLIDAYS: New Year's Day; Washington'd Birthday, Memorial Day; Independence Day; Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day
B. Employee receives 20% Premium Pay for Hazardous Waste Work.

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* ENGI0825C 07/01/2002

	Rates	Fringes
POWER EQUIPMENT OPERATORS		
TANK ERECTION:		
GROUP 1	35.36	17.15+A+B
GROUP 2	34.52	17.15+A+B
GROUP 3	36.50	17.15+A+B
GROUP 4	32.43	17.15+A+B
GROUP 5	27.22	17.15+A+B

FOOTNOTES:
A. PAID HOLIDAYS: New Year's Day; Washington's Birthday Memorial Day; Independence Day; Labor Day; Veteran's Day, Thanksgiving Day; and Christmas Day.
B. Employee receives 20% premium pay for hazardous waste work.
TANK ERECTION CLASSIFICATIONS
GROUP 1: Operating Engineers--on all Cranes, derricks, etc. with booms including jib 140 ft. or more above the ground.
GROUP 2: Operating Engineers--on all equipment, including cranes derricks, etc. with booms including jib, less than 140 ft. above the ground.
GROUP 3: Helicopters--Pilot.
GROUP 4: Air compressors, welding machines and generators (gas, diesel, or electrical driven equipment and sources of power from a permanent plant, i.e., steam, compressed air, hydraulic or other power, for the operating of any machine or automatic tools used in the erection, alteration, repair and dismantling of tanks and any and all "DUAL PURPOSE" trucks used on the construction job site.
GROUP 5: Oiler.

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* ENGI0825D 07/01/2002

	Rates	Fringes
POWER EQUIPMENT OPERATORS:		
[STEEL ERECTION]:		
GROUP 1	34.64	17.15+A+B
GROUP 2	34.73	17.15+A+B
GROUP 3	32.34	17.15+A+B
GROUP 4	29.78	17.15+A+B
GROUP 5	28.25	17.15+A+B
GROUP 6	26.49	17.15+A+B
GROUP 7	37.00	17.15+A+B

FOOTNOTES:
A. PAID HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day.
B. Employees receive 20% premium pay for hazardous waste work.
POWER EQUIPMENT OPERATORS CLASSIFICATIONS

[STEEL ERECTION]

GROUP 1: Cranes - (all cranes, land or floating with booms including job 140 ft. and over, above ground); derricks-(all derricks, land or floating with boom including jib 140 ft. and over, above ground).

GROUP 2: Cranes - (all cranes, land or floating with booms including jib less than 140 ft. above ground); derricks (all derricks, land or floating with booms including jib, less than 140 ft. above ground).

GROUP 3: "A" frame; cherry pickers 10 tons and under; hoists; all types hoists shall also include steam, gas, diesel, electric, air hydraulic, single and double drum, concrete, brick shaft caisson, or any other similar type hoisting machines, portable or stationary, except Chicago boom type; jacks-screw air hydraulic power operated unit console type (not hand jack or pile load test type) side booms.

GROUP 4: Aerial platform used hoist; compressor, 2 or 3 in battery; elevators or house cars; conveyors and tugger hoists; fireman; forklift; generators, 2 or 3 maintenance-utility man; rod bending machine (power); welding machines--(gas or electric, 2 or 3 in battery, including diesels); captain power boats; tug master power boats.

GROUP 5: Compressor, single, welding machine, single, gas, electric converters of any type, diesel; welding system multiple (rectifier transformer type); generator, single.

GROUP 6: Oiler staddle carrier.

GROUP 7: Helicopter pilot.

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* ENGI0825E 07/01/2002

	Rates	Fringes
POWER EQUIPMENT OPERATORS:		
OILOSTATIC MAINLINES & TRANSPORTATION PIPELINES:		
GROUP 1	33.50	17.15+A+B
GROUP 2	32.85	17.15+A+B
GROUP 3	29.71	17.15+A+B
GROUP 4	28.31	17.15+A+B
GROUP 5	26.49	17.15+A+B
GROUP 6	35.43	17.15+A+B

FOOTNOTES:

A. PAID HOLIDAYS: New Year's Day; Washington's Birthday, Memorial Day; Independence Day; Labor Day; Veteran's Day, Thanksgiving Day; and Christmas Day

B. Employee receives 20% premium pay for hazardous waste work.

OILOSTATIC MAINLINES AND TRANSPORTATION PIPE LINES CLASSIFICATIONS

GROUP 1: Backhoe; cranes (all types); draglines; front-end loaders (5 yds. and over); gradalls; scooper (loader and shovel); koehring and trench machines.

GROUP 2: "A" frame; backhoe (combination hoe laoder); boring and drilling machines; ditching machine, small; ditchwitch or similar type; fork lifts; front end loaders (2 yds and over but less than 5 yds.); graders, finish (fine); hydraulic cranes, 10 tons and under (over 10 tons - crane rate applies); side booms; and winch trucks (hoisting).

GROUP 3: Backfiller; brooms and sweepers; bulldozers; compressors (2 or 3 in battery); front-end loaders (under 2 yds.); generators; giraffe grinders; graders and motor patrols;

mechanic; pipe bending machine (power); tractors; water and sprinkler trucks, welder and repair mechanic.

GROUP 4: Compressor (single); dope pots (mechanical with or with out pump); dust collectors; farm tractors; pumps (4 in. suction and over); pumps (2 or less than 4 in. suction); pumps; diesel engine and hydraulic (immaterial or power); welding machines; gas or electric converters of any type, single; welding machines, gas or electric converters of any type, 2 or 3 in battery multiple welders; wellpoint systems (including installation and maintenance).

GROUP 5: Oiler, grease, gas, fuel and supply trucks and tire repair and maintenance.

GROUP 6: Helicopter-pilot.

IRON0011B 07/01/2001

	Rates	Fringes
MONMOUTH AND OCEAN COUNTIES		
IRONWORKERS:		
Structural & Ornamental	28.28	23.15
Reinforcing	26.38	23.15

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* IRON0068A 07/01/2002

	Rates	Fringes
BURLINGTON (Remainder), MERCER, MONMOUTH (South half), AND OCEAN (Middle third) COUNTIES		
IRONWORKERS:		
Structual, Ornamental	27.76	22.35
Reinforcing (Concrete Rods)	25.76	22.35

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* IRON0350A 07/01/2002

	Rates	Fringes
ATLANTIC, CAPE MAY, CUMBERLAND (Area East of a line drawn from Delaware Bay through the town of Cedarsville and upwards to the point where the county lines of Gloucester, Cumberland, and Atlantic meet), AND OCEAN (Remainder) COUNTIES		
IRONWORKERS:		
BUILDING CONSTRUCTION:		
Structural & Precast	28.70	19.35
Reinforced Concrete	27.70	19.35
Fencing,Graudrail,Erectors,Windows	24.85	19.35
HIGHWAY CONSTRUCTION:		
Reinforced Concrete	25.40	19.35
Structural & Precast	27.75	19.35

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* IRON0399A 07/01/2002

	Rates	Fringes
BURLINGTON (Southern portion up to but not including Lumberton and Chatsworth Twps.), CAMDEN, CUMBERLAND (Remainder), GLOUCESTER, AND SALEM COUNTIES		
IRONWORKERS:		
Structural, Ornamental, and Reinforcing	31.35	14.15
Hazardous work	34.35	14.15

LABO0172A 03/01/2002

	Rates	Fringes
ATLANTIC, BURLINGTON, CAMDEN, CAPE MAY, CUMBERLAND, GLOUCESTER, MERCER, OCEAN AND SALEM COUNTIES		
LABORERS:		
GROUP 1	24.55	11.20+A
GROUP 2	24.75	11.20+A
GROUP 3	25.05	11.20+A
GROUP 4	25.25	11.20+A
GROUP 5	25.50	11.20+A
GROUP 6	29.05	11.20+A
GROUP 7	27.55	11.20+A

FOOTNOTE:

A. PAID HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day, Independence Day; Labor Day, Veteran's Day, Presidential Election Day, Thanksgiving Day, and Christmas Day, provided the employee works 3 days for the same Employer within a period of ten working days consisting of five working days before and five working days after the day upon which the holiday falls or is observed.

LABORERS CLASSIFICATIONS

GROUP 1: Common laborers, landscape laborers, railroad track laborers, flagmen, salamander tenders, pitman, dumpman, waterproofing laborers, rakers and tampers on cold patch work, and wrapping and coating of all pipes.

GROUP 2: Powder carrier, magazine tender, and signalman.

GROUP 3: Sewer pipe, laser men, conduit and duct line layer, power tool operator, jack hammer, chipping hammer, pavement breaker, power buggy, concrete cutter, asphalt cutter, sheet hammer and tree cutter operators, sandblasting cutting, burning and such other power tools used to perform work usually done manually by laborers.

GROUP 4: Wagon drill operator, timberman and drill master.

GROUP 5: Finisher, manhole, catch basin or inlet builder, form setter, rammer, paver, gunite nozzleman and stonecutter.

GROUP 6: Blaster.

GROUP 7: Hazardous waste laborer.(Excludes asbestos work).

LABO0172B 03/01/2000

	Rates	Fringes
LABORERS; FREE AIR TUNNEL:		
GROUP 1	27.35	10.05+A
GROUP 2	23.95	10.05+A
GROUP 3	23.80	10.05+A
GROUP 4	23.30	10.05+A

FOOTNOTE:

A. PAID HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day; Independence Day, Labor Day, Presidential Election Day, provided the employee works 3 days for the same Employer within a period of ten working days consisting of five working days before and five working days after the day upon which the holiday falls or is observed.

LABORERS; FREE AIR TUNNEL CLASSIFICATIONS

GROUP 1: Blasterers.

GROUP 2: Skilled men (including miners, drill runners, iron men, maintenance men, conveyor men, safety miners, riggers, block

layers, cement finishers, rod men, caulkers, powder carriers, all other skilled men).
GROUP 3: Semi-skilled men (including chuck tenders, track men, nippers, brakemen, derail men, cable men, hose men, grout men, gravel men, form men, bell or signal men (top or bottom), form workers and movers, concrete workers, shaft men, tunnel laborers, all other semi-skilled).
GROUP 4: All others (including powder watchmen, change house attendants, top laborers).

LABO0172C 03/01/2000

	Rates	Fringes
ATLANTIC, BURLINGTON, CAMDEN, CAPE MAY, CUMBERLAND, GLOUCESTER, MERCER, MONMOUTH, OCEAN, SALEM, AND MIDDLESEX (Southern half) COUNTIES		
LABORERS - ASPHALT CONSTRUCTION:		
STREET:		
Head Rakers	22.05	11.70+A
Rakers & Screed Men	21.90	11.70+A
Tampers, Smothers, Kettlemen, Painters, Shovelers and Roller Boys	21.65	11.70+A
PLANT:		
Scale Mixers & Burner Men	21.90	11.70+A
Feeders and Dust Men	21.65	11.70+A

FOOTNOTE:
A. PAID HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day; Independence Day; Labor Day; Veteran's Day, Presidential Election Day, Thanksgiving Day, and Christmas Day provided The Employee works 3 days for same employer within a period of ten working days consisting of five working days before and five working days after the day upon which the holiday falls or is observed.

LABO0222A 05/01/2001

	Rates	Fringes
BURLINGTON (Twps. of Cinnaminson, Delance, Delran, East Hampton, Edgewater Park, Evesham, Hainesport, Lumberton, Medford, Moorestown, Mount Laurel, Pemberton, Shamong, South Hampton, Tabernacle, West Hampton, Willingsboro and Woodland); CAMDEN; CUMBERLAND; GLOUCESTER; AND SALEM COUNTIES		
LABORERS (BUILDING CONSTRUCTION):		
CLASS A	22.45	11.25
CLASS B	21.95	11.25
CLASS C	18.66	11.25

LABORERS CLASSIFICATIONS (BUILDING CONSTRUCTION)
CLASS A: Jack Hammer, Tamper, Motorized Tampers and Compactors, Street Cleaning Machines, Scaffold Builder, Hydro, Demolition Equipment, All types of Motorized Fork Lifts Riding Motor Buggy Operator, Bobcat Operator, Mortar Man, Burners, Nozzle Man on Gunite work.
CLASS B: All laborers not listed in Class A or C.
CLASS C: Laborers doing Janitorial-type light clean up work associated with the turnover of the project to the owner All Flagman, and those manning temporary heat of all types.

LABO0415A 05/01/2001

	Rates	Fringes
ATLANTIC; BURLINGTON (Twps. of Bass River and Washington); CAPE MAY; CUMBERLAND (Twps. of Commercial, Dawne, Fairfiled, Lawrence, Maurce, and Millville); AND OCEAN (That portion up to and including Lacy Twp.) COUNTIES		
LABORERS (BUILDING CONSTRUCTION):		
CLASS A	22.45	11.25
CLASS B	21.95	11.25
CLASS C	18.66	11.25

LABORERS CLASSIFICATIONS (BUILDING CONSTRUCTION)

CLASS A: Jack Hammer, Tamper, Motorized Tampers and Compactors, Street Cleaning Machines, Scaffold Builder, Hydro Demolition Equipment, all types of Motorized Fork Lifts, Riding Motor Buggy Operator, Bobcat Operator, Mortar Man, Burners, Nozzle Man on Gunite work.

CLASS B: All laborers not listed in Class A or C.

CLASS C: Laborers doing Janitorial- type light clean up work associated with the turnover of the project to the owner All flagman, and those manning temporary heat of all types.

LABO0472A 03/01/2002

	Rates	Fringes
MONMOUTH COUNTY		
LABORERS (HEAVY AND HIGHWAY CONSTRUCTION):		
GROUP 1	24.55	11.20+A
GROUP 2	24.75	11.20+A
GROUP 3	25.05	11.20+A
GROUP 4	25.25	11.20+A
GROUP 5	25.50	11.20+A
GROUP 6	29.05	11.20+A
GROUP 7a	27.55	11.20+A
Group 7b	25.55	11.20+A

LABORERS CLASSIFICATIONS (HEAVY & HIGHWAY)

GROUP 1: Common laborers, landscape laborers, railroad track laborers, flagmen, salamander tenders, pitman, dumpman, waterproofing laborers, rakers and tampers on cold patch work, and wrapping and coating of all pipes, & Asphalt Laborers.

GROUP 2: Powder carrier, magazine tender, signalman, asphalt raker, and asphalt screedman

GROUP 3: Sewer pipe, laser men, conduit and duct line layer, power tool operator, jack hammer, chipping hammer, pavement breaker, power buggy, concrete cutter, asphalt cutter, sheet hammer and tree cutter operators, sandblasting cutting, burning, power tool operator, and such other power tools used to perform work usually done manually by laborers.

GROUP 4: Wagon drill operator, timberman and drill master.

GROUP 5: Finisher, manhole, catch basin or inlet builder, form setter, rammer, paver, gunite nozzleman, and stone cutter

GROUP 6: Blaster.

Group 7a: Hazardous waste laborer required to wear level A,B, or C personal protection.

GROUP 7b: Certified laborer working a hazardous waste removal project or site at a task requiring hazardous waste related certification, but who is not working in a zone requiring level

A,B, or C personal protection.
FOOTNOTE:
A. PAID HOLIDAYS: New Year's Day, Washington's Birthday,Memorial Day, Independence Day, Labor Day, Veteran's Day, Presidential Election Day, Thanksgiving Day, and Christmas Day provided the employee works 3 days for the same employer within a period of 10 working days consisting of 5 working days before and 5 working days after the day upon which the holiday falls or is observed

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LABO0595A 05/01/2001

	Rates	Fringes
BURLINGTON (Remainder), MERCER, MONMOUTH,and OCEAN (Remainder) COUNTIES:		
LABORERS (BUILDING CONSTRUCTION):		
CLASS A	22.45	11.25
CLASS B	21.95	11.25
CLASS C	18.66	11.25

LABORERS CLASSIFICATIONS (BUILDING CONSTRUCTION)
CLASS A: Jack Hammer; Tamper; Motorized Tampers and Compactors Street Cleaning Machines; Scaffold Builder; Hydro Demolition Equipment; All types of Motorized Fork Lifts; Riding Motor Buggy Operator; Bob Cat Operator; Mortar Man; Burners; Nozzle Man on gunite Work.
CLASS B: All Laborers not listed in Class A or C.
Class C Laborers doing Janitorial type light clean up associated with the turnover of the project or part of a project to the owner; All Flagman; and those manning temporary heat of all types.
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LABO1030A 04/01/2001

	Rates	Fringes
LABORERS: (The removal, abatement, enclosure and decontamination of personal protective equipment, chemical protective clothing and machinery relating to asbestos and/or toxic and hazardous waste of materials which shall include but not necessarily be limited to: the erection, moving, servicing and dismantling to all enclosures, scaffolding, barricades, and the operation of all tools and equipment normally used in the removal or abatement of asbesots and toxic and hazardous waste or materials, the labeling, bagging, cartoning, crating, or other packaging of materials for disposal; and the clean up of the work site and all other work incidental to the removal, abatement, encapsulation, enclosure, and decontamination of asbestos or toxic and hazardous waste materials; and in addition, all work tasks involved in the maintenance and operation of energy resource recover plants (co-generation plants).)		
LABORERS	21.85	10.12

PAIN0252H 05/01/2001

	Rates	Fringes
ATLANTIC, CAMDEN, CAPE MAY, CUMBERLAND, GLOUCESTER, SALEM, and parts of BURLINGTON and OCEAN (everything south of these cities in Burlington and Ocean Counties-Florence to Bustleton to Columbus to Jobstown to Pemberton to Ongs Hat to Chatsworth to Whiting to Pinewald to Ocean Gate to Seaside Heights) COUNTIES:		
GLAZIERS	26.55	12.15

PAIN0711A 05/01/2000

	Rates	Fringes
ATLANTIC, BURLINGTON, CAMDEN, CAPE MAY, CUMBERLAND, GLOUCESTER, MONMOUTH, OCEAN, & SALEM COUNTIES:		
PAINTING, PAPERHANGING & ALLIED WORK SPRAYING, SANDBLASTING, DIPPING, POWER TOOLS (Over 115 volts) & PAPERHANGING PASTING APPARATUS WORK ON TANKS, BRIDGES, TOWERS, STACKS, & OPEN STRUCTURAL STEEL, WORK FROM CABLES & SWINGING SCAFFOLDS, EXTERIOR WORK ABOVE THREE STORIES	28.75	2.54+27%
	31.25	2.54+27%
REPAINT WORK & PREPARATION THEREFORE (including jobs where no major alterations are taking place but excluding bridges, stacks, elevated tanks & generating stations)	22.00	2.54+27%

PAIN0711H 05/01/2000

	Rates	Fringes
MERCER COUNTY		
PAINTERS:		
New Construction and Major Alterations	28.75	27%+2.55
Repaint Work	22.00	27%+2.55
Spraying or application of Hazardous or Dangerous Materials on Repaint Work	24.00	27%+2.55
Bridges, TV & Radio Towers, Structural Steel & Tanks above 3 stories in height (30' or over), Smoke Stacks, Water Towers, Sand-Blasting, Steam Cleaning, Spraying, or application of Hazardous Materials	31.25	27%+2.55
Paperhanging	25.60	27%+2.55

PAIN0711J 08/01/1999

	Rates	Fringes
DRYWALL FINISHERS & TAPERS	28.25	11.23

PAIN0711K 05/01/2000

	Rates	Fringes
MERCER, MONMOUTH and parts of BURLINGTON AND OCEAN (everything north of these cities in BURLINGTON and OCEAN COUNTIES Florence to Bustleton to Columbus to Jobstown to Pemberton to Onge Hat to Chatsworth to Whiting to Pinewald to Ocean Gate to Seaside Heights) COUNTIES:		
GLAZIERS:	28.75	10.30

PLAS0008I 05/01/2001

	Rates	Fringes
CAMDEN, GLOUCESTER and SALEM COUNTIES:		
PLASTERERS	25.35	13.40

PLAS0008L 11/01/2001

	Rates	Fringes
ATLANTIC,BURLINGTON,CAPE MAY,CUMBERLAND,MERCER,MONMOUTH & OCEAN COUNTIES:		
PLASTERERS	28.50	13.40

PLAS0699A 05/01/2002

	Rates	Fringes
CAMDEN, GLOUCESTER, AND SALEM COUNTIES		
CEMENT MASONS	27.30	12.55

PLUM0009I 03/01/2002

	Rates	Fringes
AIR CONDITIONING & REFRIGERATION MECHANICS	25.16	9.24

SCOPE OF WORK:
Installation of air conditioning and refrigeration equipment whose combined tonnage does not exceed 15 tons. Installation of water cooled air conditioning that does not exceed 10 tons (includes piping of compenent system and erection of water tower). Installation of air cooled air conditioning that does not exceed 15 tons. Installation of air conditioning equipment of the "Package-Unitary" rooftop type, the combined tonnage of which does not exceed 35 tons. Packaged Unitary Air Conditioning and Refreigeration Institute (ARI) as follows: "A unitary air conditioner consists of one or more cooling coil, and air moving device, a cpmpressor and condenser combination, and may include a heating function as well". Any and all related piping to the above installation will be done under the appropriate trade jurisdiction.

PLUM0009J 07/01/2001

	Rates	Fringes

BURLINGTON (from the town of Burlington City, to everything north along County Road Route 541 East also known as High Street, until it reaches the city of Mount Holly which is also Local 9 territory, Madison Avenue in Mount Holly to State Road Route 38

East, again everything north along State Road Route 38 East until its cross over, State Road Route 206 and becomes County Road Route 530, continuing on including Pemberton Boro to south on Magnolia Road in Pemberton Township to Magnolia New Lisbon Road (Route 545), to south on Mount Holly Misery Road to State Road Route 70 East to the Ocean County Line), MERCER,MONMOUTH, AND OCEAN COUNTIES:

PLUMBERS & PIPEFITTERS	33.13	15.25

PLUM0322A 05/01/2001

	Rates	Fringes

ATLANTIC; BURLINGTON (Ramainder) CAMDEN; CAPE MAY; CUMBERLAND; GLOUCESTER; AND SALEM COUNTIES

PLUMBERS/PIPEFITTERS	29.11	15.70

ROOF0004A 06/01/1996

	Rates	Fringes

MONMOUTH COUNTY (Remainder), AND OCEAN (Remainder) COUNTIES

ROOFERS	24.22	11.75

ROOF0030D 05/01/2002

	Rates	Fringes

ATLANTIC, BURLINGTON, CAMDEN, CAPE MAY, CUMBERLAND, GLOUCESTER, MERCER AND SALEM COUNTIES; and the following portions of MONMOUTH AND OCEAN COUNTIES: West of a line starting from the point on Route 70 where Burlington and Ocean Counties meet, Easterly along Route 70 to Route 571, along Route 571 to Cassville, Easterly on Route 528 to Van Hiseville, Northerly on Route 527 to Manalapan, Westerly on Route 33 to the Monmouth County Line

ROOFERS:		
Shingle, slate and tile	19.25	6.17
All other work	26.00	13.05+A

FOOTNOTE:
A. PAID HOLIDAY: Election Day.

SFNJ0669B 04/01/2002

	Rates	Fringes

ATLANTIC, BURLINGTON, CAPE MAY, CUMBERLAND, MERCER (Remainder), MONMOUTH, OCEAN, AND SALEM (Remainder) COUNTIES

SPRINKLER FITTERS	33.00	6.05

SFNJ0692C 05/01/2001

	Rates	Fringes
CAMDEN, GLOUCESTER, MERCER (Town of Trenton), AND SALEM (Penns Grove, excluding Penns Grove Airport) COUNTIES		
SPRINKLER FITTERS	33.57	11.00

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* SHEE0019M 05/01/2002

	Rates	Fringes
CAMDEN, GLOUCESTER, & SALEM COUNTIES:		
SHEET METAL WORKER	30.68	17.90+H

H-Election Day is a paid holiday.

SHEE0027B 06/01/2000

	Rates	Fringes
ATLANTIC, BURLINGTON, CAPE MAY, CUMBERLAND, MERCER, MONMOUTH AND OCEAN COUNTIES		
SHEET METAL WORKERS	31.00	15.38

SUNJ1002A 12/07/1993

	Rates	Fringes
MERCER COUNTY		
CEMENT MASONS (BUILDING CONSTRUCTION ONLY)	19.60	8.83

TEAM0331A 01/01/1998

	Rates	Fringes
ATLANTIC AND CAPE MAY COUNTIES		
TRUCK DRIVERS:		
GROUP 1	20.75	8.92+A
GROUP 2	20.90	8.92+A
GROUP 3	21.10	8.92+A
GROUP 4	21.25	8.92+A

FOOTNOTE:

A. PAID HOLIDAYS: New Year's Day; Washington's Birthday; Memorial Day; Independence Day; Labor Day; Veteran's Day; Presidential Election Day; Thanksgiving Day;& Christmas Day; provided the employee works 3 days in the week in which the holiday falls.

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1: Striaght Truck Driver,Dump Truck Driver,Water Truck Driver,Transit Mix Driver,Pickup Truck Driver,Tank Truck Driver

Track Truck Driver,Agitator Truck Driver,Concrete Mobile Unit Driver,Tringer Bead Truck Driver,Ross Carrier Driver,Warehouse Forklift Driver,A Frame Truck Driver,Gin Pole Truck Driver,

Form Truck Driver,Driver for Truck having Self Loading/Unloading Attachment,& Vacuum Truck/Trailer.
GROUP 2:Trucks Towing Driver
GROUP 3:Trailer Truck Driver,Winch Truck Driver,Off Road Dump Truck Driver,Fuel Truck Driver,Tractor Trailer(any trailer driver),Asphalt Oil Distributor Driver,& Off Road Water Truck Driver.
GROUP 4:Mechanics.

TEAM0469D 05/01/2000

	Rates	Fringes
BURLINGTON (Remainder), MERCER, MONMOUTH, AND OCEAN COUNTIES		
TRUCK DRIVERS:		
GROUP 1	26.35	11.835+A
GROUP 2	26.40	11.835+A
GROUP 3	26.50	11.835+A
GROUP 4	26.60	11.835+A

FOOTNOTE:

A. Employees working or receiving pay for 80 days within a year receive one week's paid vacation (48 hours); 125 days receive two weeks' vacation (96 hours); 145 days receive 15 days (120 hours); 15 years seniority and 145 days receive 4 weeks vacation (160 hours).

PAID HOLIDAYS: New Year's Day; Washington's Birthday; Memorial Day; Independence Day; Labor Day; Columbus Day; Veteran's Day, General Election Day; Thanksgiving Day; and Christmas Day provided the employee has been assigned to work or "shapes" one day of the calendar week during which the holiday falls. Employee receives $3.00 per hour premium pay for hazardous waste work.

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1: Drivers on the following type vehicles: straight dumps, flats, floats, pick-ups, container haulers, fuel, water sprinkler, road oil, stringer, bead, hot pass, bus dumpcrete, transit mixers, agitator mixer, half truck, winch truck, side-0-matic, dynamite, power, x-ray, welding, skid, jeep, station wagon, stringer, A-frame, all dual purpose trucks, truck with mechanical tailgate, asphalt distributor, batch trucks, seeding, mulching, fertilizer, air compressor trucks (in transit), parts chaser, escort, scissor, Hi-lift, telescope, concrete breaker, gin pole, stone, sand, asphalt distributor and spreader, nipper, fuel trucks (drivers on fuel trucks, inlcuding handling of unit), skid truck (debris container - entire unit), concrete mobile trucks (entire unit), expediter (parts chaser), beltcrete trucks, pumpcrete trucks, line truck, reel truck, wreckers, utility trucks, tank trucks, warehousemen, warehouse partsmen, yardmen, lift truck in warehouse, warehouse clerk, parts man, material checkers,receivers shippers, binning men (materials cardex man);

drivers on the following type vehicle: broyhill coal tar epoxy

trucks, little-ford bituminous distributor, slurry seal truck or vehicle, thiokol trackmaster pick-up (swamp cat pickup, bucket loader dump truck and any rubber-tired tractor used in pulling and towing farm wagons and trailers of any description, similar type vehicles); off-site and on-site repair shop, team drivers, vacuum or vac-all trucks (entire unit)

GROUP 2: Drivers on straight 3-axle materials; truck and floats

GROUP 3: Drivers on all euclid-type vehicles; euclids, international harvesters, wabcos, caterpillar, koehring, tractors, and wagons, dumptors, straight, bottom, rear and side dumps, carryalls and scrapers (not self-loading - loading over the top), water sprinkler, trailers, water pulls and similar types of vehicles; drivers on tractors and trailer type vehicles; flat, floats, I-beam, low beds, water sprinkler, bituminous transit mix, road oil, fuel bottom dump hopper, rear dump, office shanty, epoxy, asphalt, agitator mixer, mulching, stringer, seeding, fertilizing pole spread, bituminous distributor, water pulls (entire unit) (tractor trailer), reel trailer and similar types of vehicles

GROUP 4: Winch Trailer Drivers

TEAM0676A 05/01/1996

	Rates	Fringes
BURLINGTON (Area West of the NJ Turnpike to the Delaware River), CAMDEN, CUMBERLAND, GLOUCESTER AND SALEM COUNTIES		
TRUCK DRIVERS:		
GROUP 1	20.20	8.1875+A+B
GROUP 2	20.25	8.1875+A+B
GROUP 3	20.40	8.1875+A+B
GROUP 4	20.60	8.1875+A+B
GROUP 5	20.75	8.1875+A+B
GROUP 6	*	8.1875+A+B

FOOTNOTES:

A. Employee who has worked or received pay for 90 days within a year prior to his anniversary date shall receive 56 hours straight time vacation pay; for 3 years but less than 8 years of service he will receive 100 hours of straight time vacation pay; 15 years or more he will receive 165 hours of straight time vacation pay.

B. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Presidential Election Day, Thanksgiving Day, Christmas Day, and two personal holidays, Good Friday, and Christmas Eve afternoon (provided employee works that morning) on the condition that the employee works or is available for work on at least two days in the week in which the holiday occurs.

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1: Warehouseman

GROUP 2: Dump truck, water truck, transit mix, pickup, tank, track, agitator, concrete mobile unit, dytinger bead, tack rig, ross carrier, warehouse forklift, A-frame, gin pole form truck, truck having self-loading/unloading attachment, straight

GROUP 3: Truckstowing

GROUP 4: Trailer winch off road dump, fuel, tractor trailer, asphalt oil distributor, off road water truck

GROUP 5: Mechanics

*GROUP 6: Truck drivers, on hazardous waste removal work on a state or federally designated hazardous waste site where the truck driver is in direct contact with hazardous materials and when personal protective equipment is required for respiratory, skin and eye protection the teamster shall receive $2.25 per hour in addition to the regular rate of pay including overtime pay.

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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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

DREDGING WAGE RATES:

General Decision Number NJ020006
Superseded General Decision No. NJ010006
State: New Jersey Construction Type:

DREDGING County(ies):
STATEWIDE
All Dredging except self propelled hopper dredges, on the Atlantic Coast & tributary waters emptying into the Atlantic Ocean.

Modification Number	Publication Date
0	03/01/2002

COUNTY(ies):
STATEWIDE

ENGI0025D 10/01/2001

	Rates	Fringes
DIPPER & CLAMSHELL DREDGE:		
Operator	27.45	6.20+a+b
Engineer	24.17	6.20+a+b
Maintenance Engineer	23.07	5.60+a+b
Welder	22.71	5.60+a+b
Mate	21.51	5.60+a+b
Boat Master	22.73	6.20+a+b
Boat Captain	21.66	5.60+a+b
Oiler	18.18	5.00+a+b
Deckhand; Tug Deckhand	17.73	5.00+a+b
Scowman	17.49	5.00+a+b
DRAG BUCKET DREDGE:		
Operator	25.09	6.20+a+b
Engineer	21.41	6.20+a+b
Maintenance Engineer	21.21	5.60+a+b
Mate	19.82	5.60+a+b
Deckhand	16.17	5.00+a+b
HYDRAULIC DREDGES:		
Leverman	26.95	6.20+a+b
Engineer; Derrick Operator	23.64	6.20+a+b
Chief Mate	23.29	6.20+a+b
Chief Welder	23.94	6.20+a+b
Maintenance Engineer	23.07	5.60+a+b
Electrician	22.92	6.20+a+b
Welder Dredge	22.70	5.60+a+b
Spider Barge Operator	22.50	5.60+a+b
Mate	21.51	5.60+a+b
Boat Master	22.72	6.20+a+b
Boat Captain	21.66	5.60+a+b
Steward	21.49	6.20+a+b
Oiler	18.18	5.00+a+b
Deckhand	17.50	5.00+a+b
Tug Deckhand	17.73	5.00+a+b
Shoreman	17.50	5.00+a+b
Assistant Cook	17.61	5.00+a+b
Night Cook	17.61	5.00+a+b
Messman	17.10	5.00+a+b
Janitor/Porter	17.10	5.00+a+b
Fill Placer	23.29	6.20+a+b

	Rates	Fringes
Assistant Fill Placer	21.32	6.20+a+b
COMPANY LEAD DREDGEMAN:		
Lead Dredgeman	26.95	6.20+a+b
TUG BOATS over 1,000 H.P. (with master or captain having license endorsed for 200 miles off shore):		
Tug Master	24.14	6.20+a+b
Tug Captain	23.17	6.20+a+b
Tug Chief Engineer	22.45	5.60+a+b
Tug Engineer	21.99	5.60+a+b
Tug Deckhand	17.73	5.00+a+b
TUG BOATS over 1,000 H.P. (without master or captain having license endorsed for 200 miles off shore):		
Tug Master	22.72	6.20+a+b
Tug Captain	21.66	5.60+a+b
Tug Engineer	21.99	5.60+a+b
Tug Deckhand	17.73	5.00+a+b
DRILL BOATS:		
Engineer	23.54	6.20+a+b
Blaster	23.81	6.20+a+b
Driller	23.55	6.20+a+b
Welder	23.30	5.60+a+b
Machinist	23.30	5.60+a+b
Tug Master	20.48	6.20+a+b
Tug Captain	19.53	5.60+a+b
Oiler	20.46	5.00+a+b
Tug Deckhand	15.97	5.00+a+b
Core Driller	18.56	5.00+a+b
DIVERS:		
Diver	39.98	6.20+a+b
Standby Diver	26.60	6.20+a+b
Tender	30.77	6.20+a+b
Standby Tender	22.11	5.60+a+b
DREDGING PIPELINE CABLE-LAYING:		
Leverman	27.56	6.20+a+b
Control Tower Operator	24.35	6.20+a+b
Rigger	18.01	5.00+a+b
Line up Operator, End Prep.	17.43	5.00+a+b
Diver	40.85	6.20+a+b
Diver Tender	25.36	6.20+a+b
ENGINEER:		
1st	24.35	6.20+a+b
2nd, 3rd & 4th	24.04	6.20+a+b
Electrician	24.48	6.20+a+b
Electro Hydro Tech.	19.70	5.60+a+b
Tug Master	25.57	6.20+a+b
Tug Captain	22.29	6.20+a+b

PREMIUMS: Additional 20% for hazardous material work

FOOTNOTES APPLICABLE TO ABOVE CRAFTS:

a. PAID HOLIDAYS: New Year's Day, Martin Luther King Day, Memorial Day, Good Friday, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, and Christmas Day

b. VACATION: Seven percent (7%) of the straight time rate

multiplied by the total hours worked.

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

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

END OF GENERAL DECISION

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Below are two samples of the construction project identification sign showing how this panel is adaptable for use to identify either military (top), or civil works projects (bottom). The graphic format for this 4' x 6' sign panel follows the legend guidelines and layout as specified below. The large 4' x 4' section of the panel on the right is to be white with black legend. The 2' x 4' section of the sign on the left with the full Corps signature (reverse version) is to be screen printed Communications Red on the white background.

This sign is to be placed with the Safety Performance Sign shown on the following page. Mounting and fabrication details are provided on page 16.4.

Special applications or situations not covered in these guidelines should be referred to the District/Division sign coordinator.

Legend Group 1: One- to two-line description of Corps relationship to project.
Color: White
Typeface: 1.25" Helvetica Regular
Maximum line length: 19"

Legend Group 2: Division or District Name (optional). Placed below 10.5" Reverse Signature (6" Castle).
Color: White
Typeface: 1.25" Helvetica Regular

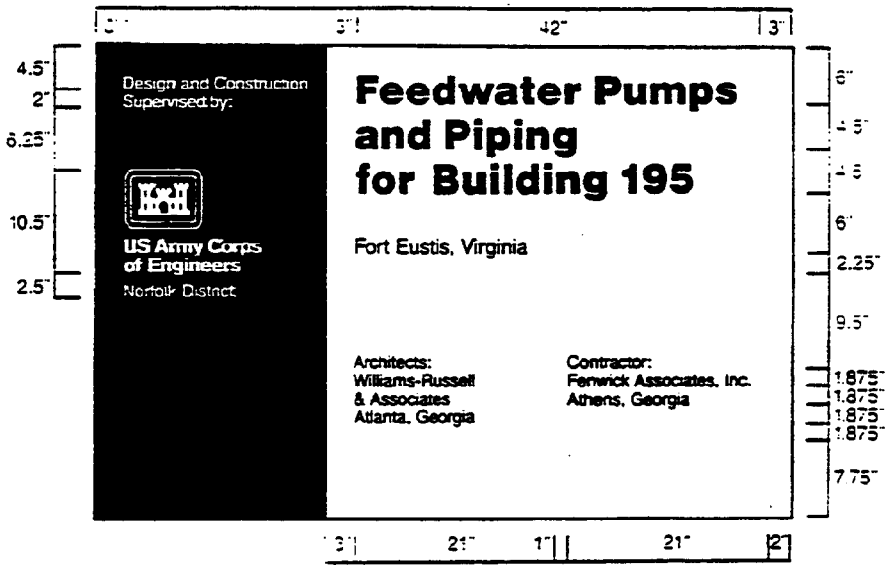
Legend Group 3: One- to three-line project title legend describes the work being done under this contract.
Color: Black
Typeface: 3" Helvetica Bold
Maximum line length: 42"

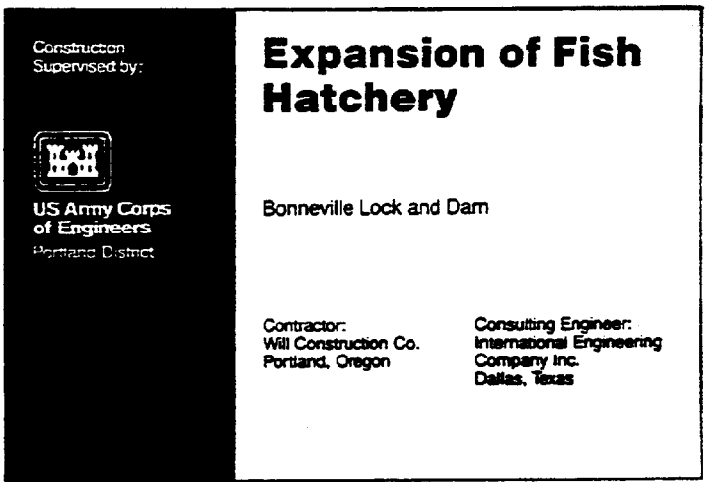
Legend Group 4: One- to two-line identification of project or facility (civil works) or name of sponsoring department (military).
Color: Black
Typeface: 1.5" Helvetica Regular
Maximum line length: 42"

Cross-align the first line of Legend Group 4 with the first line of the Corps Signature (US Army Corps) as shown.

Legend Groups 5a-b: One- to five-line identification of prime contractors including: type (architect, general contractor, etc.), corporate or firm name, city, state. Use of Legend Group 5 is optional.
Color: Black
Typeface: 1.25" Helvetica Regular
Maximum line length: 21"

All typography is flush left and rag right, upper and lower case with initial capitals only as shown. Letter- and word-spacing to follow Corps standards.





Panels are fabricated using HDO plywood with dimensional lumber uprights and bracing. The sign faces are non-reflective vinyl.

All legend sare to be die-cut or computer-cut in the sizes and typefaces specified and applied to the white panel backgorund following the graphic formats shown on pages 16.2-3. The Communications Red panel on the left side of the construction project sign with Corps signature (reverse version) is screen printed onto the white background.

Sign Type	Legend Size	Panel Size	Post Size	Specification Code	Mounting Height	Color Bkg/Lgd
CID-01	various	4" x 6"	4" x 4"	HDO-3	48"	WH-RD/BK

Safety Performance Sign

Each contractor's safety record is to be posted on Corps managed or supervised construction projects.

The graphic format, color, size and typefaces used on the sign are to be reproduced exactly as specified below. The title with First Aid logo in the top section of the sign, and the performance record captions are standard for all signs of this type. Legend Groups 2 and 3 below identify the project and the contractor and are to be placed on the sign as shown.

Safety record numbers are mounted on individual metal plates and are screw-mounted to the background to allow for daily revisions to posted safety performance record.

Legend Group 1: Standard two-line title "Safety is a Job Requirement", with (8" od.) Safety Green First Aid logo. Color: To match PMS 347
Typeface: 3" Helvetica Bold
Color: Black

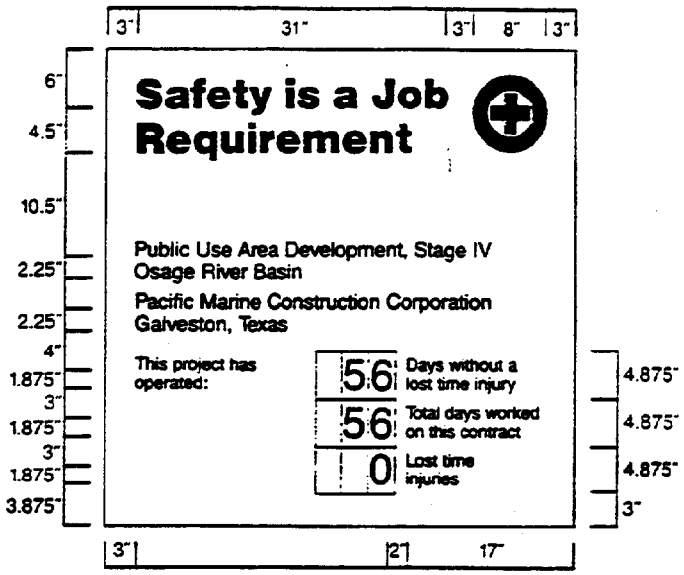
Legend Group 2: One- to two-line project title legend describes the work being done under this contract and name of host project.
Color: Black
Typeface: 1.5" Helvetica Regular
Maximum line length: 42"

Legend Group 3: One- to two-line identification: name of prime contractor and city, state address.
Color: Black
Typeface: 1.5" Helvetica Regular
Maximum line length: 42"

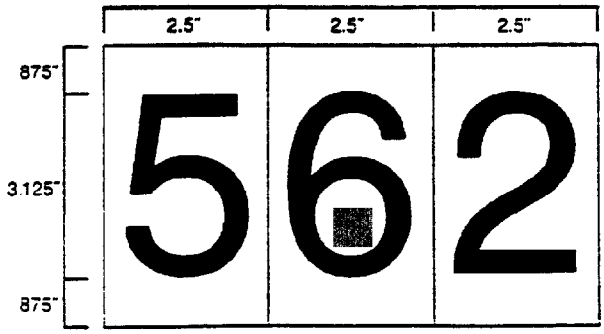
Legend Group 4: Standard safety record captions as shown.
Color: Black
Typeface: 1.25" Helvetica Regular

Replaceable numbers are to be mounted on white .060 aluminum plates and screw-mounted to background.
Color: Black
Typeface: 3" Helvetica Regular
Plate size: 2.5" x .5"

All typography is flush left and rag right, upper and lower case with initial capitals only as shown. Letter- and word-spacing to follow Corps standards.



Sign Type	Legend Size	Panel Size	Post Size	Specification Code	Mounting Height	Color Bkg/Lgd
CID-02	various	4" x 4"	4" x 4"	HDO-3	48"	WH/BK-GR



All Construction Project Identification signs and Safety Performance signs are to be fabricated and installed as described below, except that Project signs for U.S. Air Force shall be fabricated and installed as shown on page 16.2.

The sign panels are to be fabricated from .75" High Density Overlay Plywood.

Sign graphics to be prepared on a white non-reflective vinyl film with positionable adhesive backing.

All graphics except for the Communications Red background with Corps signature on the project sign are to be die-cut or computer-cut non-reflective vinyl, pre-spaced legends prepared in the sizes and typefaces specified and applied to the background panel following the graphic formats shown on pages 16.2-3.

The 2' x 4' Communications Red panel (to match PMS-032) with full Corps signature (reverse version) is to be screen printed on the white background. Identification of the District or Division may be applied under the signature with white cut vinyl letters prepared to Corps standards. Large scale reproduction artwork for the signature is provided on page 4.8 (photographically enlarge from 6.875" to 10.5").

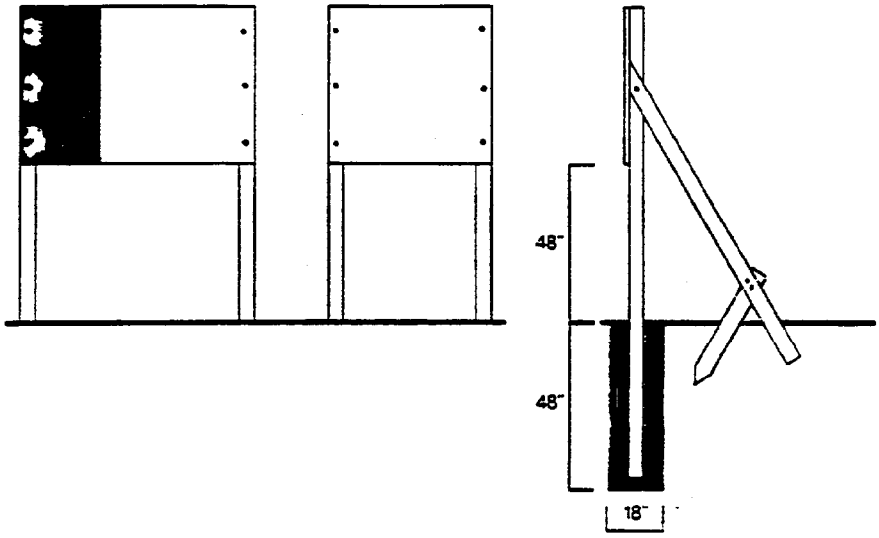
Drill and insert six (6) .375" T-nuts from the front face of the HDO sign panel. Position holes as shown. Flange of T-nut to be flush with sign face.

Apply graphic panel to prepared HDO plywood panel following manufacturers' instructions.

Sign uprights to be structural grade 4" x 4" treated Douglas Fir or Southern Yellow Pine, No.1 or better. Post to be 12' long. Drill six (6) .375" mounting holes in uprights to align with T-nuts in sign panel. Countersink (.5") back of hole to accept socket head cap screw (4" x .375").

Assemble sign panel and uprights. Imbed assembled sign panel and uprights in 4' hole. Local soil conditions and/or wind loading may require bolting additional 2" x 4" struts on inside face of uprights to reinforce installation as shown.

Shown below the mounting diagram is a panel layout grid with spaces provided for project information. Photocopy this page and use as a worksheet when preparing sign legend orders.



Construction Project Sign
Legend Group 1: Corps Relationship

1. _____
2. _____

Legend Group 2: Division/District Name

1. _____
2. _____

Legend Group 3: Project Title

1. _____
2. _____
3. _____

Legend Group 4: Facility Name

1. _____
2. _____

Legend Group 5a: Contractor/A&E

1. _____
2. _____
3. _____
4. _____
5. _____

Legend Group 5b: Contractor/A&E

1. _____
2. _____
3. _____
4. _____
5. _____

Safety Performance Sign
Legend Group 1: Project Title

1. _____
2. _____

Legend Group 2: Contractor/A&E

1. _____
2. _____

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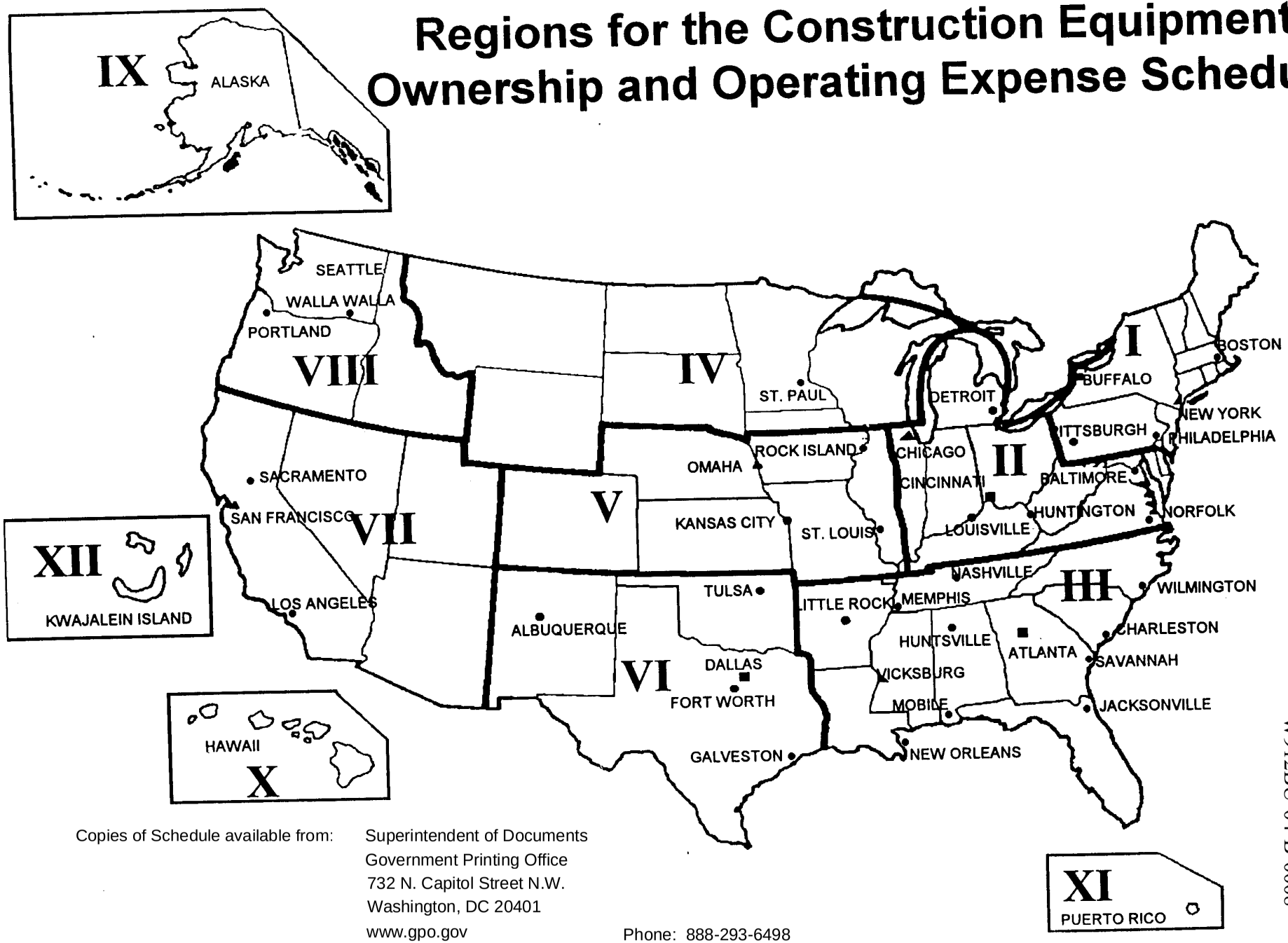
Regions for the Construction Equipment Ownership and Operating Expense Schedule



Copies of Schedule available from: Superintendent of Documents
Government Printing Office
732 N. Capitol Street N.W.
Washington, DC 20401
www.gpo.gov

Phone: 888-293-6498

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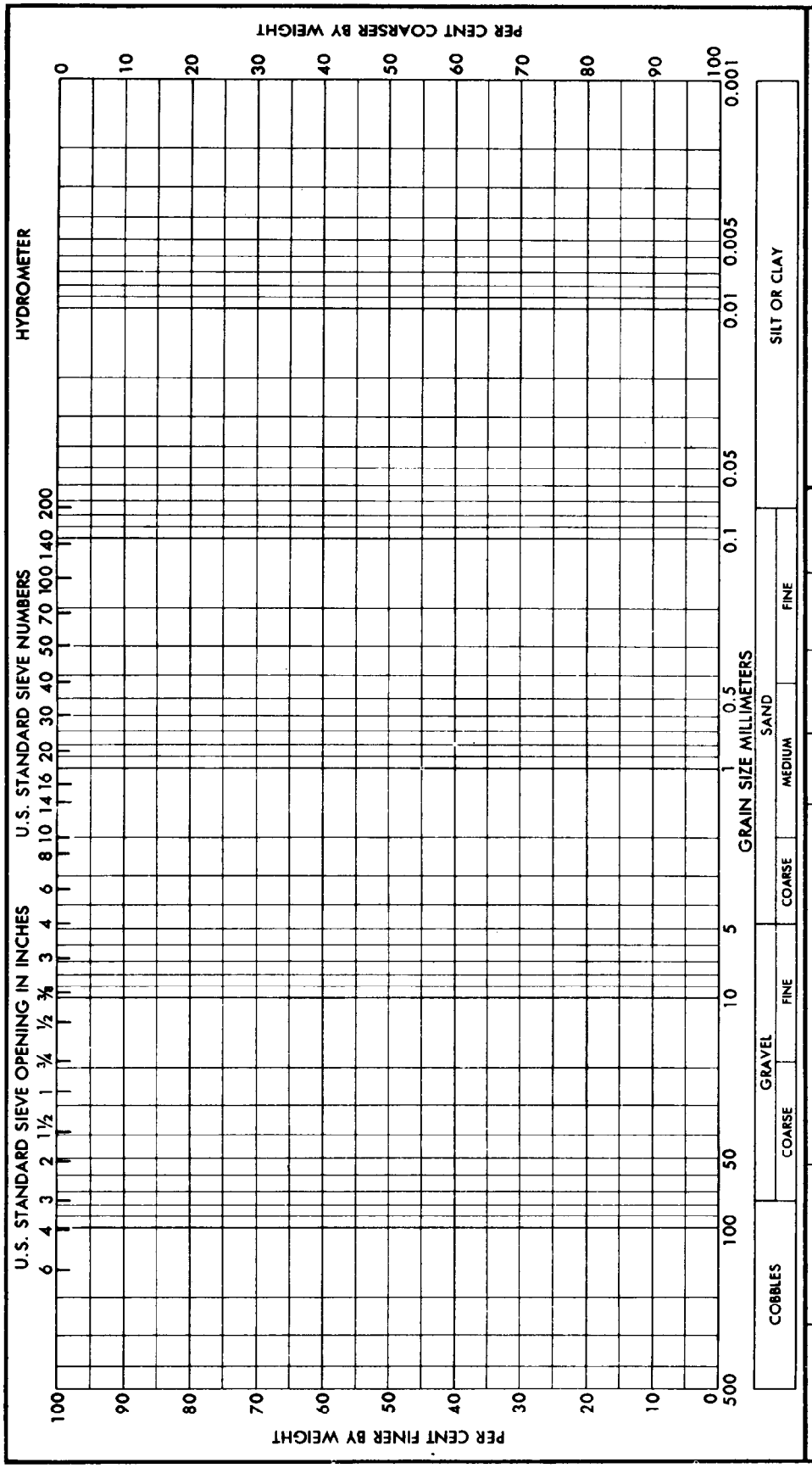

SAMPLE NO.	ELEV OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI

PROJECT

AREA

BORING NO.

DATE

GRADATION CURVES

ENG FORM 2087
1 MAY 63

REPLACES WES FORM NO. 1241, SEP 1962, WHICH IS OBSOLETE.

U. S. GOVERNMENT PRINTING OFFICE : 1963 OF—709-126

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CAPE MAY CITY
SURVEY BASELINE No. 1

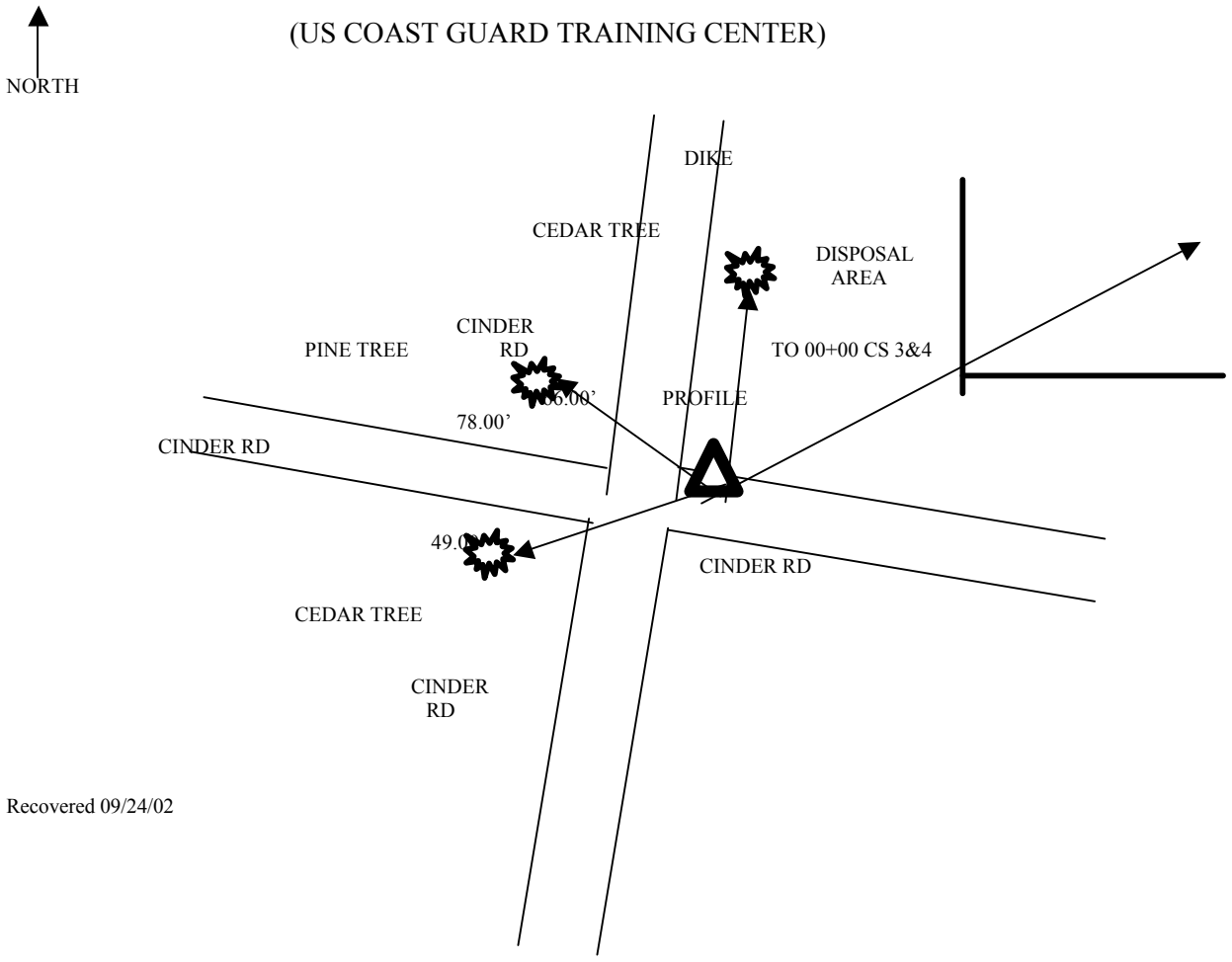
COUNTRY	TYPE OF MARK	STATION	
USA	C OF E DISC	STATION "A" (10+00.13)	
LOCALITY CAPEMAY NJ	STAMPING ON MARK "A"	AGENCY (CAST IN MARKS) *Corps of Engineers*	ELEVATION (FT) 7.23
LATITUDE	LONGITUDE	DATUM NAD 83	DATUM NAVD 88
(NORTHING) **(FT)** 40865.29 (M)	**(EASTING)** **(FT)** 385008.15 (M)	GRID AND ZONE NEW JERSEY 2900	ESTABLISHED BY (AGENCY) TUGA
(NORTHING) **(FT)** (M)	**(EASTING)** **(FT)** (M)	GRID AND ZONE	DATE: SEPY 95 ORDER: GPS

TO OBTAIN GRID AZIMUTH, ADD ° ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) ° ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		

STATION "A" IS A CORPS OF ENGINEERS DISC SET FLUSH WITH NORTH EDGE CINDER ACCESS RD. AT NORTH EAST CORNER OF INTERSECTION OF ROADS. LOCATED IN U.S. COAST GUARD TRAINING CENTER AT CAPE MAY N.J. STATION IS MARKED WITH 3 FOOT HIGH CARSONITE REFERENCE MARKER.



Recovered 09/24/02

SKETCH

DA FORM 1 OCT 64 **1959** REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION
For use of this form, see TM 5-237; the proponent agnecy is TRADOC.

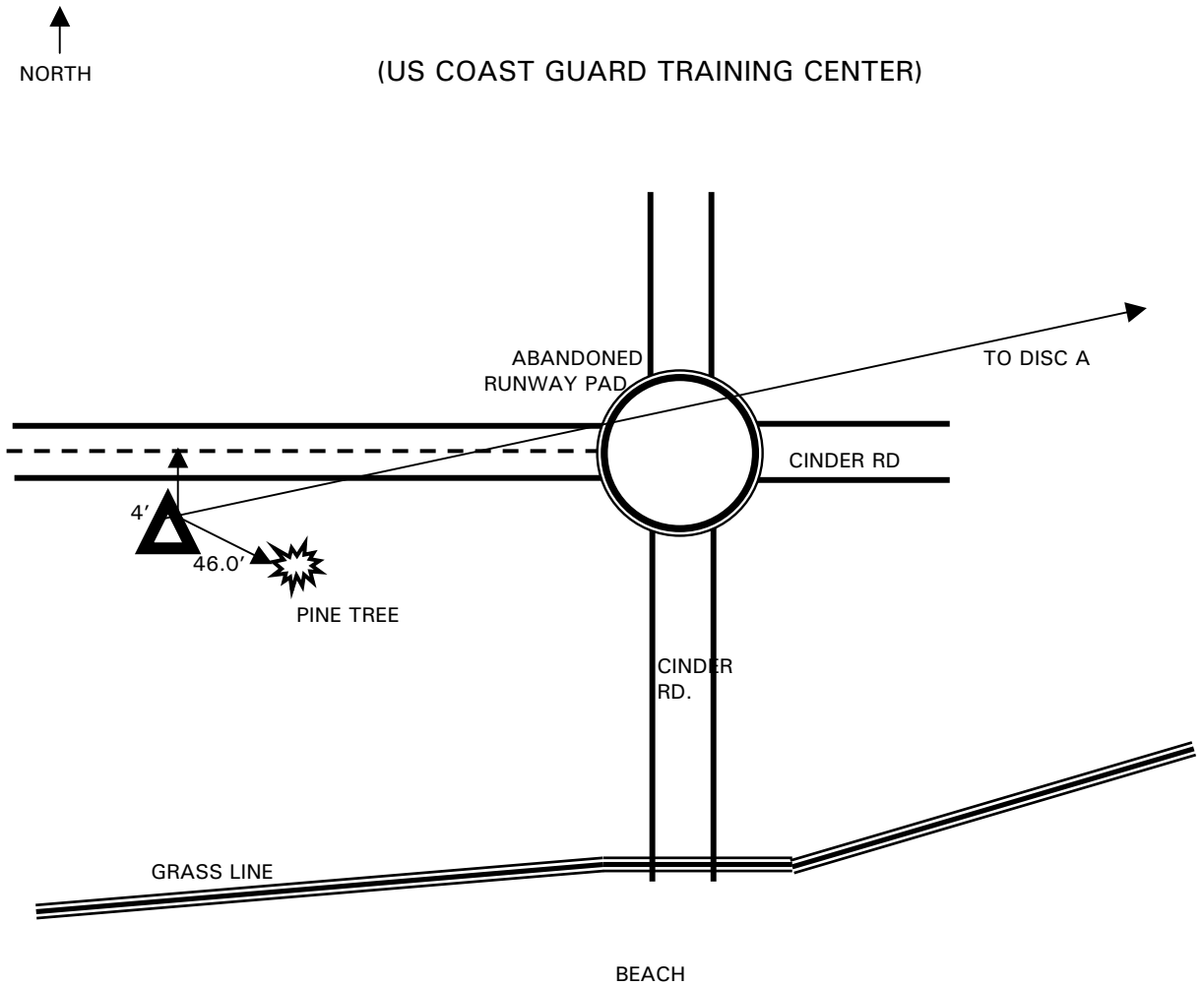
COUNTRY	TYPE OF MARK	STATION	
USA	C OF E DISC	STATION "B" (20+00.44)	
LOCALITY CAPEMAY NJ	STAMPING ON MARK "B"	AGENCY (CAST IN MARKS) *Corps of Engineers*	ELEVATION (FT) 9.66
LATITUDE	LONGITUDE	DATUM NAD 83	DATUM NAVD 88
(NORTHING) **(FT)** (M) 40609.52	**(EASTING)** **(FT)** (M) 384041.10	GRID AND ZONE NEW JERSEY 2900	ESTABLISHED BY (AGENCY) TUGA
(NORTHING) **(FT)** (M)	**(EASTING)** **(FT)** (M)	GRID AND ZONE	DATE SEPT 95 / ORDER GPS

TO OBTAIN GRID AZIMUTH, ADD ° ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) ° ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		

STATION "B" IS A CORPS OF ENGINEERS DISC SET FLUSH WITH THE GROUND ON THE SOUTH SIDE OF CINDER ACCESS RD. LOCATED IN U.S. COAST GUARD TRAINING CENTER GROUNDS AT CAPE MAY N.J. STATION IS MARKED WITH A 3 FOOT HIGH CARSONITE REFERENCE MARKER.



SKETCH

DA FORM 1 OCT 64 **1959** REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION
For use of this form, see TM 5-237; the proponent agency is TRADOC.

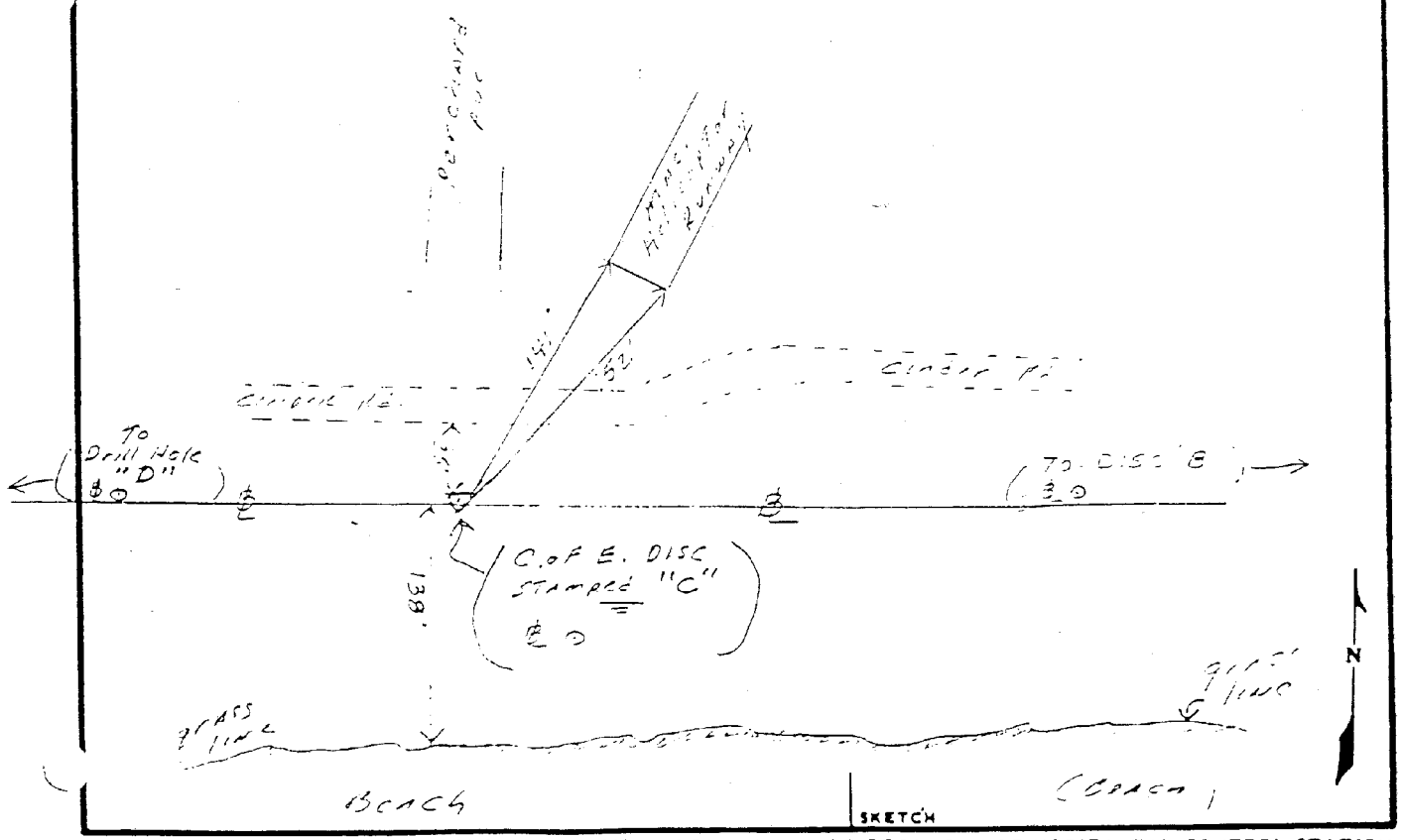
COUNTRY	TYPE OF MARK	STATION	
U.S.A.	C. of E. DISC.	STA. "C" (℄ 30+00.78)	
LOCALITY	STAMPING ON MARK "C"	AGENCY (CAST IN MARKS) C. of E.	ELEVATION [redacted] (FT)
LATITUDE U.S. COAST GUARD TRAIN. CENTER CAPE MAY N.J.	LONGITUDE	DATUM NAD 27	DATUM NGVD 29
(NORTHING)([redacted]) (FT) 140125.99 [redacted]	(EASTING)([redacted]) (FT) 1938242.96 [redacted]	GRID AND ZONE N.J. (2900)	ESTABLISHED BY (AGENCY) USCOE BKG-121
(NORTHING)(EASTING) (FT) 40320.14 (M)	(EASTING)(NORTHING) (FT) 383083.52 (M)	GRID AND ZONE NAD 83	DATE 9Dec94 / ORDER

TO OBTAIN GRID AZIMUTH, ADD ° ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD)(SUB.) ° ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC)(GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		

STA. "C" (℄) is a C. of E. Disc set flush with ground on S.W. side of cinder access Rd. Loc. in U.S. Coast Guard Training Center grounds @ Cape May N.J. Sta. is marked with a 3' high carsonite ref. marker.



SKETCH

DA FORM OCT 54 1959 REPLACES DA FORMS 1959 AND 1960, 1 FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION
For use of this form, see TM 5-237; the proponent agency is TRADOC.

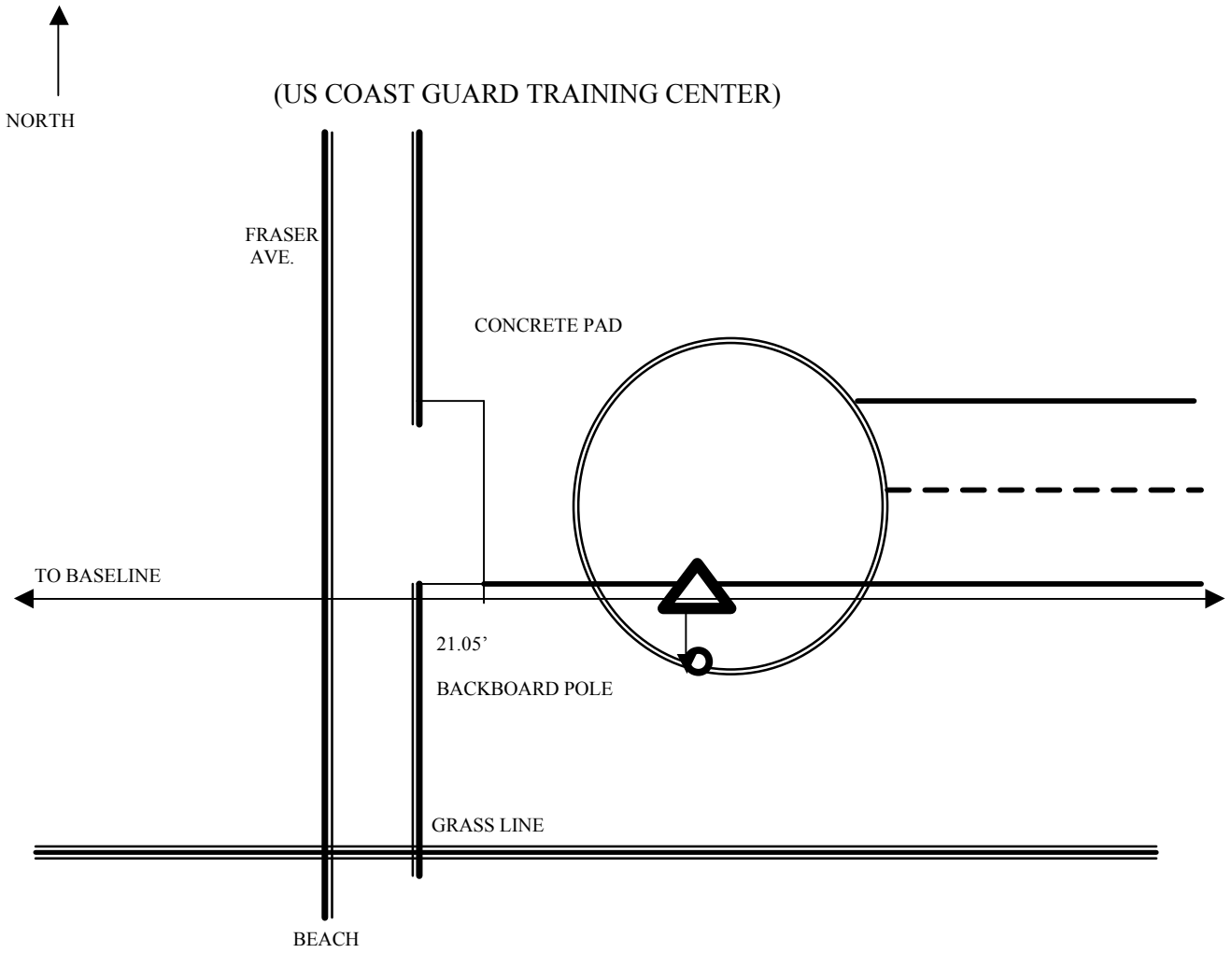
COUNTRY	TYPE OF MARK	STATION	
USA	DRILL HOLE	STATION "D" (40+01.08)	
LOCALITY CAPEMAY NJ	STAMPING ON MARK	AGENCY (CAST IN MARKS) *Corps of Engineers*	ELEVATION (FT) 10.43
LATITUDE	LONGITUDE	DATUM NAD 83	DATUM NAVD 88
(NORTHING) **(FT)** 40030.85 (M)	**(EASTING)** **(FT)** 382125.97 (M)	GRID AND ZONE NEW JERSEY 2900	ESTABLISHED BY (AGENCY) TUGA
(NORTHING) **(FT)** (M)	**(EASTING)** **(FT)** (M)	GRID AND ZONE	DATE SEPT 95 / ORDER GPS

TO OBTAIN GRID AZIMUTH, ADD ° ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) ° ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		

STATION "D" IS A DRILL HOLE IN CONCRETE PAD. OF BASKETBALL COURT LOCATED AT SOUTH EAST END OF FRASER AVE. LOCATED IN U.S. COASTGUARD TRAINING CENTER CAPE MAY N.J. STATION IS MARKED WITH PAINTER TRIANGLE.



SKETCH

DA FORM 1 OCT 64 1959 REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

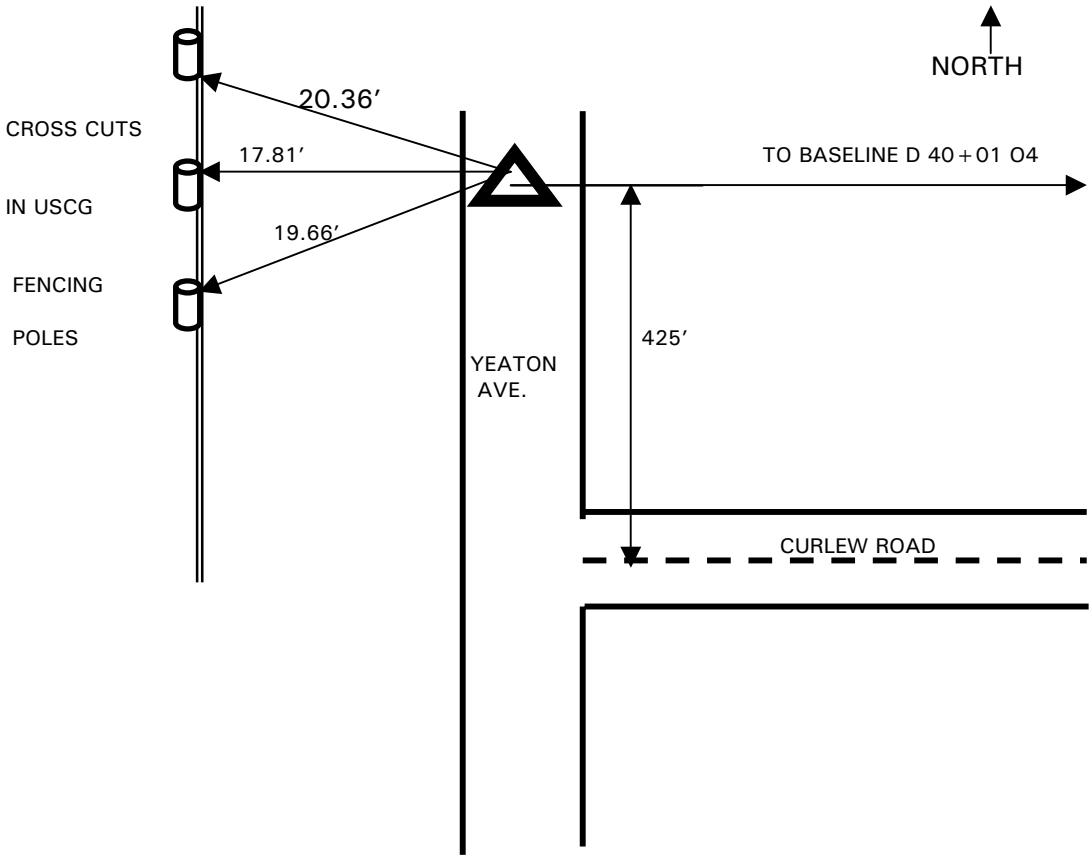
DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION
For use of this form, see TM 5-237; the proponent agency is TRADOC.

COUNTRY	TYPE OF MARK	STATION	
USA	RR SPIKE	53+48.16	
LOCALITY CAPEMAY NJ	STAMPING ON MARK	AGENCY (CAST IN MARKS) *Corps of Engineers*	ELEVATION (FT) 6.86
LATITUDE	LONGITUDE	DATUM NAD 83	DATUM NAVD 88
(NORTHING) **(FT)** 39643.51	**(EASTING)** **(FT)** 380835.78	GRID AND ZONE NEW JERSEY 2900	ESTABLISHED BY (AGENCY) TUGA
(NORTHING) **(FT)** (M)	**(EASTING)** **(FT)** (M)	GRID AND ZONE	DATE SEPT 95 / ORDER GPS

TO OBTAIN GRID AZIMUTH, ADD ° ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) ° ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		



SKETCH

DA FORM 1 OCT 64 **1959** REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

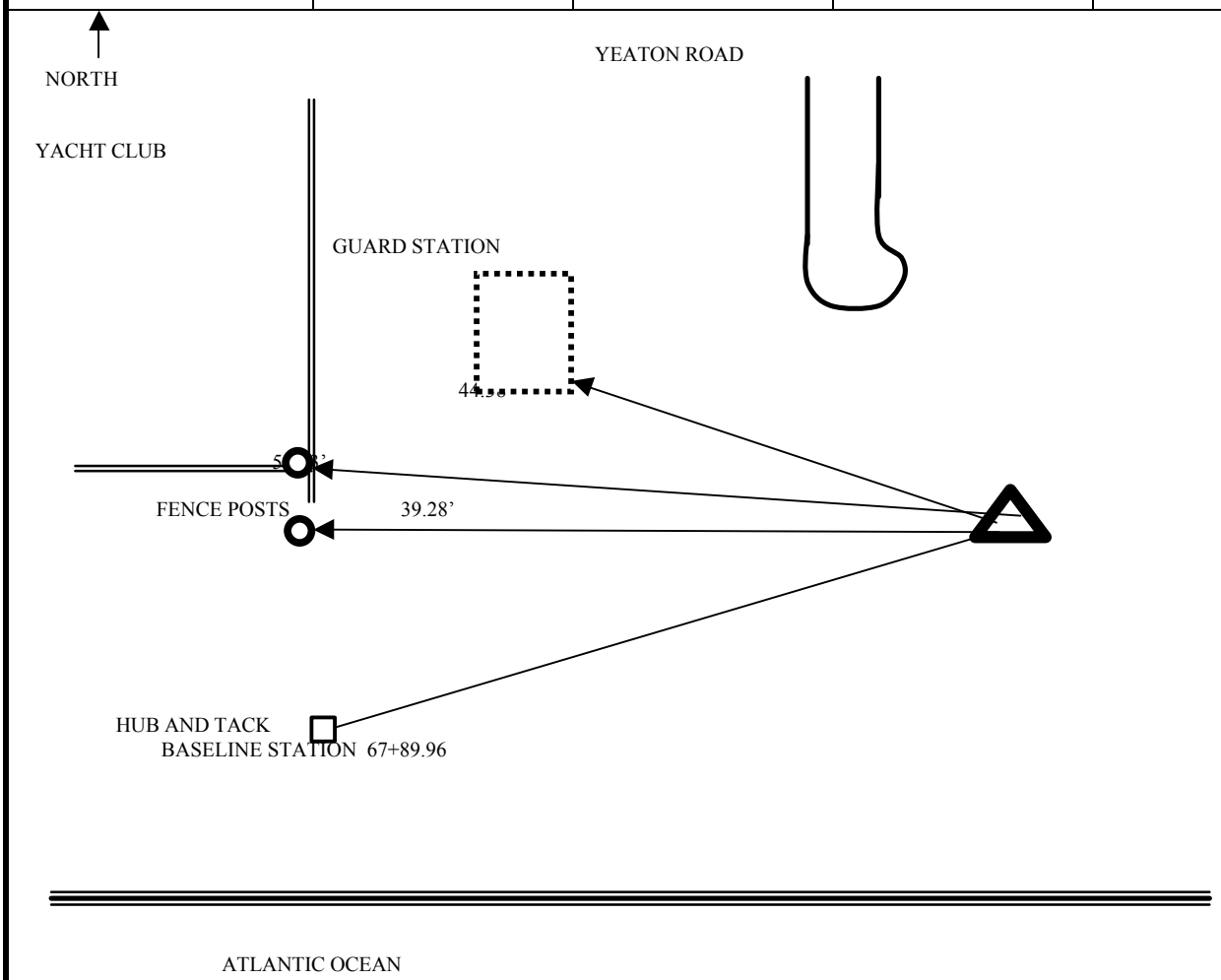
DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION
For use of this form, see TM 5-237; the proponent agnecy is TRADOC.

COUNTRY	TYPE OF MARK	STATION	
USA	1 ½ INCH OPEN IRON PIPE	61+37.01	
LOCALITY CAPEMAY NJ	STAMPING ON MARK	AGENCY (CAST IN MARKS) *Corps of Engineers*	ELEVATION (FT) 7.75
LATITUDE	LONGITUDE	DATUM NAD 83	DATUM NAVD 88
(NORTHING) (FT) 38888.08	**(EASTING) (FT)** 381062.96	GRID AND ZONE NEW JERSEY 2900	ESTABLISHED BY (AGENCY) TUGA
(NORTHING) (FT) (M)	**(EASTING) (FT)** (M)	GRID AND ZONE	DATE SEPT 95 / ORDER GPS

TO OBTAIN GRID AZIMUTH, ADD ° ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) ° ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		



SKETCH

DA FORM 1 OCT 64 1959 REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

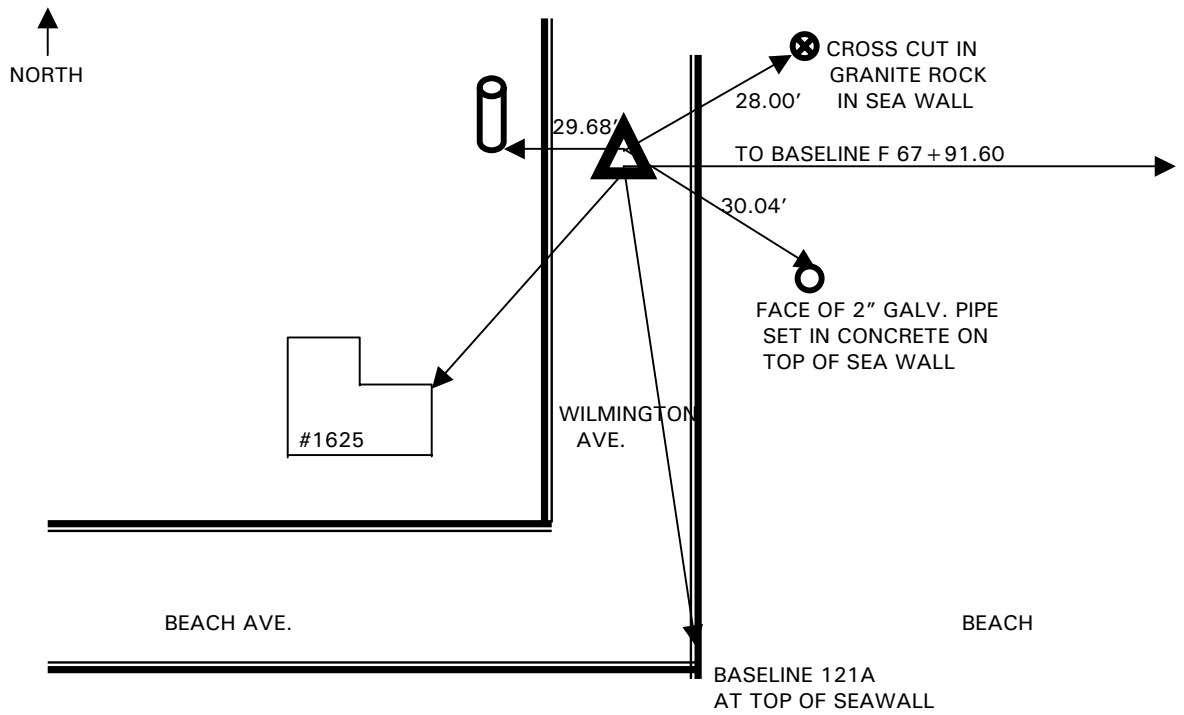
DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION
For use of this form, see TM 5-237; the proponent agnecy is TRADOC.

COUNTRY	TYPE OF MARK	STATION	
USA	P.K. NAIL	75+90.26	
LOCALITY CAPEMAY NJ	STAMPING ON MARK	AGENCY (CAST IN MARKS) *Corps of Engineers*	ELEVATION (FT) 6.50
LATITUDE	LONGITUDE	DATUM NAD 83	DATUM NAVD 88
(NORTHING) **(FT)** 38058.22	**(EASTING)** **(FT)** 379870.02	GRID AND ZONE NEW JERSEY 2900	ESTABLISHED BY (AGENCY) TUGA
(NORTHING) **(FT)** (M)	**(EASTING)** **(FT)** (M)	GRID AND ZONE	DATE SEPT 95 / ORDER GPS

TO OBTAIN GRID AZIMUTH, ADD ° ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) ° ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		



Recovered 09/24/02

SKETCH

DA FORM 1 OCT 64 1959 REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

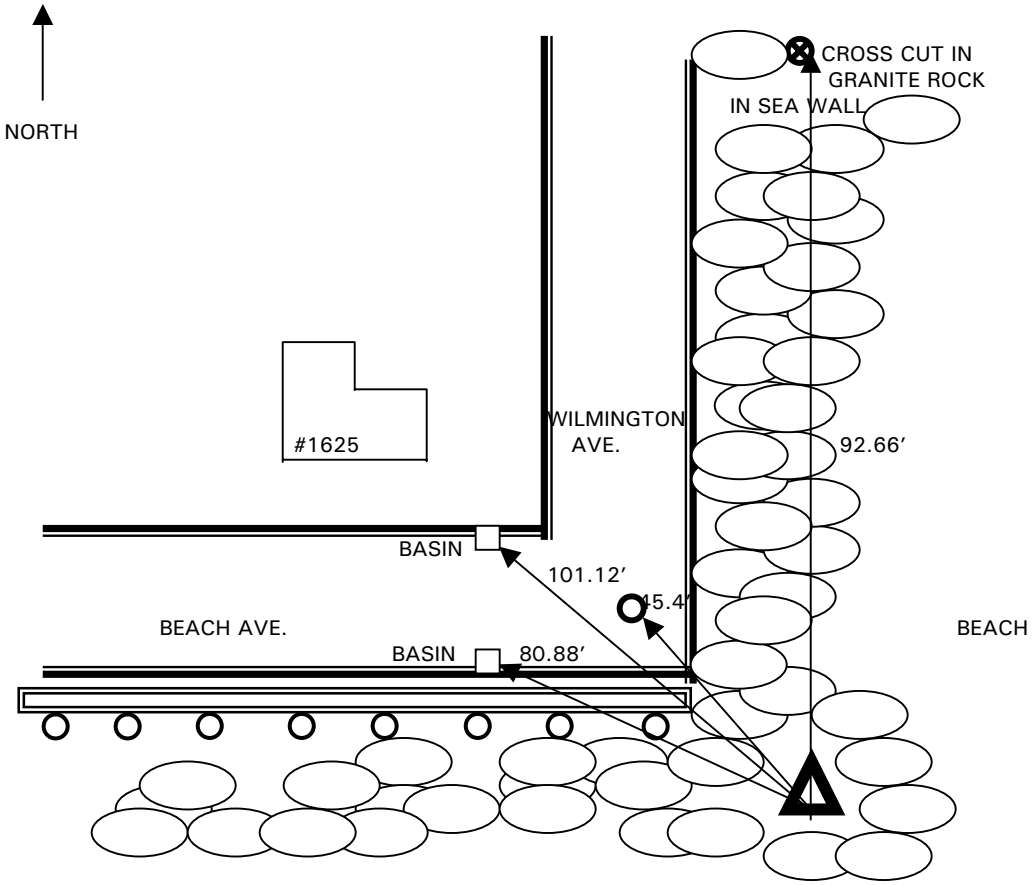
DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION
For use of this form, see TM 5-237; the proponent agnecy is TRADOC.

COUNTRY	TYPE OF MARK	STATION	
USA	CROSS CUT IN TOP OF SEA WALL EAST END	78 + 27.11	
LOCALITY CAPEMAY NJ	STAMPING ON MARK	AGENCY (CAST IN MARKS) *Corps of Engineers*	ELEVATION (FT) 8.75
LATITUDE	LONGITUDE	DATUM NAD 83	DATUM NAVD 88
(NORTHING) **(FT)** 37839.58	**(EASTING)** **(FT)** 379961.11	GRID AND ZONE NEW JERSEY 2900	ESTABLISHED BY (AGENCY) TUGA
(NORTHING) **(FT)** (M)	**(EASTING)** **(FT)** (M)	GRID AND ZONE	DATE SEPT 95 / ORDER GPS

TO OBTAIN GRID AZIMUTH, ADD ° ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) ° ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		



Recovered 09/24/02

SKETCH

DA FORM 1 OCT 64 **1959** REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION
For use of this form, see TM 5-237; the proponent agnecy is TRADOC.

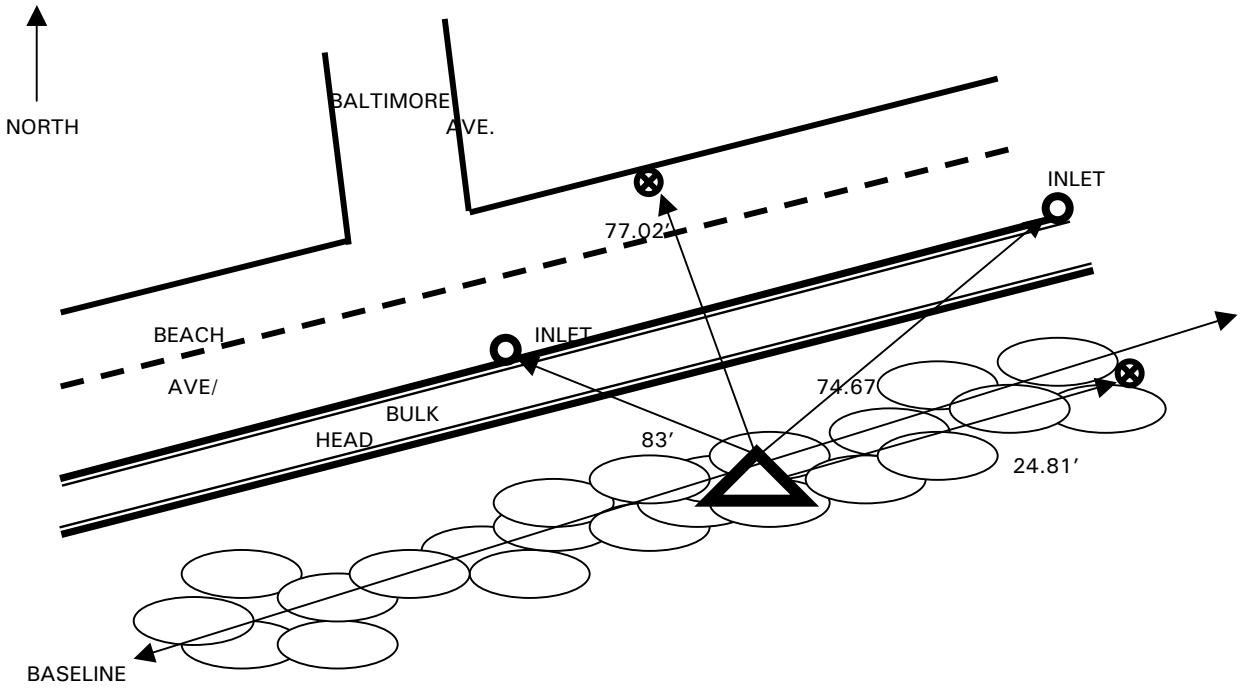
COUNTRY	TYPE OF MARK	STATION	
USA	DRILL HOLE (WITH FEATHERS)	90+78.83	
LOCALITY CAPEMAY NJ	STAMPING ON MARK	AGENCY (CAST IN MARKS) *Corps of Engineers*	ELEVATION (FT) 9.19
LATITUDE	LONGITUDE	DATUM NAD 83	DATUM NAVD 88
(NORTHING) **(FT)** 37465.51	**(EASTING)** **(FT)** 378766.59	GRID AND ZONE NEW JERSEY 2900	ESTABLISHED BY (AGENCY) TUGA
(NORTHING) **(FT)** (M)	**(EASTING)** **(FT)** (M)	GRID AND ZONE	DATE SEPT 95 / ORDER GPS

TO OBTAIN GRID AZIMUTH, ADD ° ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) ° ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		

STATION 90+78.83 LOCATED ON TOP OF CONCRETE AND STONE SEAWALL IN THE VICINITY OF BEACH AVE. AND BALTIMORE AVE. IN CAPE MAY NJ.
STATION IS 83.00 FEET SOUTH EAST OF CROSS CUT IN RIM STEEL GRATE INLET.
STATION IS 77.02 FEET SOUTH OF CROSS CUT ON SOUTH EAST CORNER (1.0X1.5) SQUARE MANHOLE COVER.
STATION IS 74.67 FEET SOUTH WEST OF CROSS CUT IN RIM STEEL GRATE INLET.
STATION IS 24.81 FEET WEST OF CROSS CUT IN STONE ON TOP CONCRETE STONE SEA WALL.



SKETCH

DA FORM 1 OCT 64 1959 REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION
For use of this form, see TM 5-237; the proponent agnecy is TRADOC.

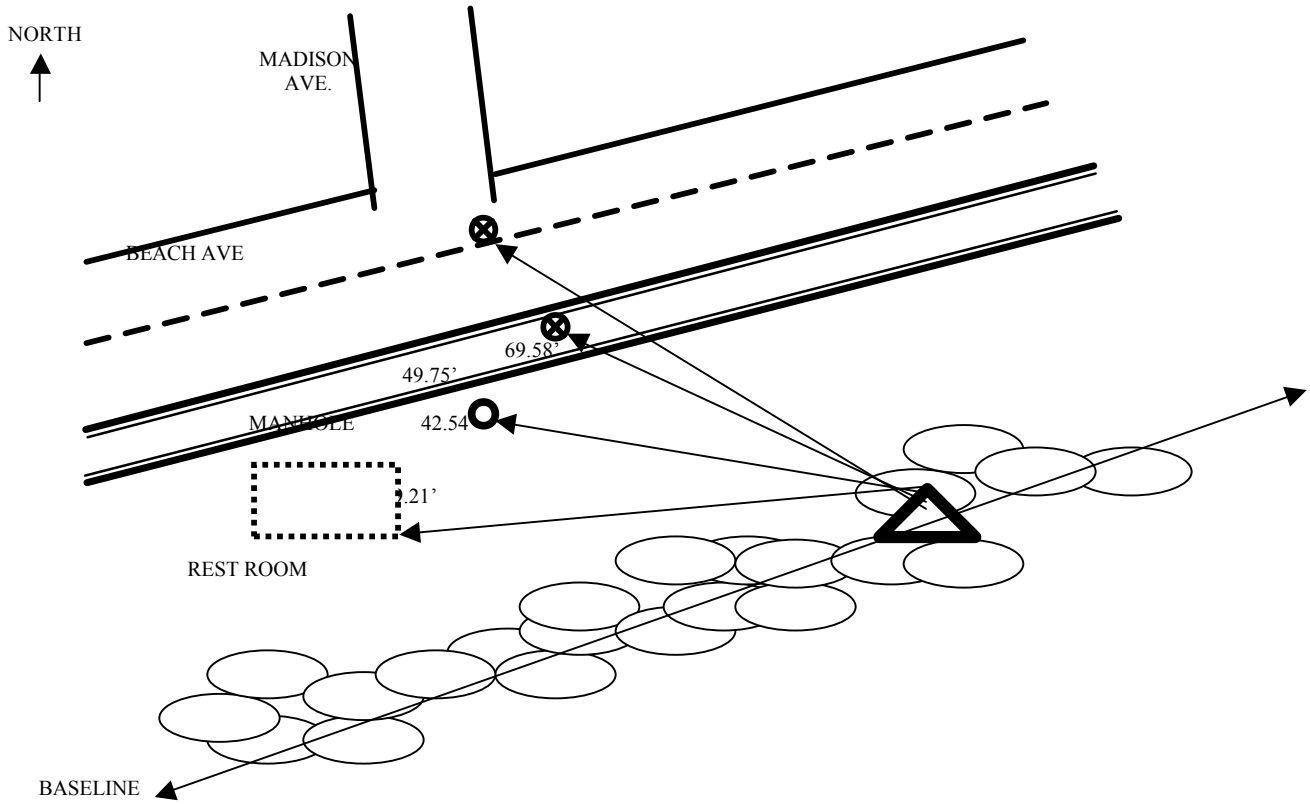
COUNTRY	TYPE OF MARK	STATION	
USA	DRILL HOLE WITH FEATHERS	104+82.89	
LOCALITY CAPEMAY NJ	STAMPING ON MARK	AGENCY (CAST IN MARKS) *Corps of Engineers*	ELEVATION (FT) 9.94
LATITUDE	LONGITUDE	DATUM NAD 83	DATUM NAVD 88
(NORTHING) (FT) 36922.55	**(EASTING) (FT)** 377471.77	GRID AND ZONE NEW JERSEY 2900	ESTABLISHED BY (AGENCY) TUGA
(NORTHING) (FT) (M)	**(EASTING) (FT)** (M)	GRID AND ZONE	DATE SEPT 95 / ORDER GPS

TO OBTAIN GRID AZIMUTH, ADD ° ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) ° ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		

STATION 104+82.89 IS LOCATED ON TOP OF A CONCRETE AND STONE SEAWALL AT THE INTERSECTION OF BEACH AVE AND TRENTON AVE IN CAPE MAY NJ.
STATION IS 25.09 FEET NORTH EAST OF CROSS CUT IN STONE ON TOP OF SEAWALL.
STATION IS 79.21 FEET EAST OF THE NORTH EAST CORNER OF THE REST ROOM BUILDING.
THE STATION IS 42.52 FEET SOUTH EAST OF NORTH EAST CORNER OF CONCRETE BOX CATCH BASIN (WITH STEEL GRATE INLET)
STATION IS 49.75 FEET SOUTH EAST OF CROSS CUT IN SOUTH EAST CORNER OF STEEL RIM ON STEEL GRATE INLET.
STATION IS 69.58 FEET SOUTH EAST OF CROSS CUTIN STEEL RIM OF MANHOLE COVER.



SKETCH

DA FORM 1 OCT 64 1959 REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION
For use of this form, see TM 5-237; the proponent agnecy is TRADOC.

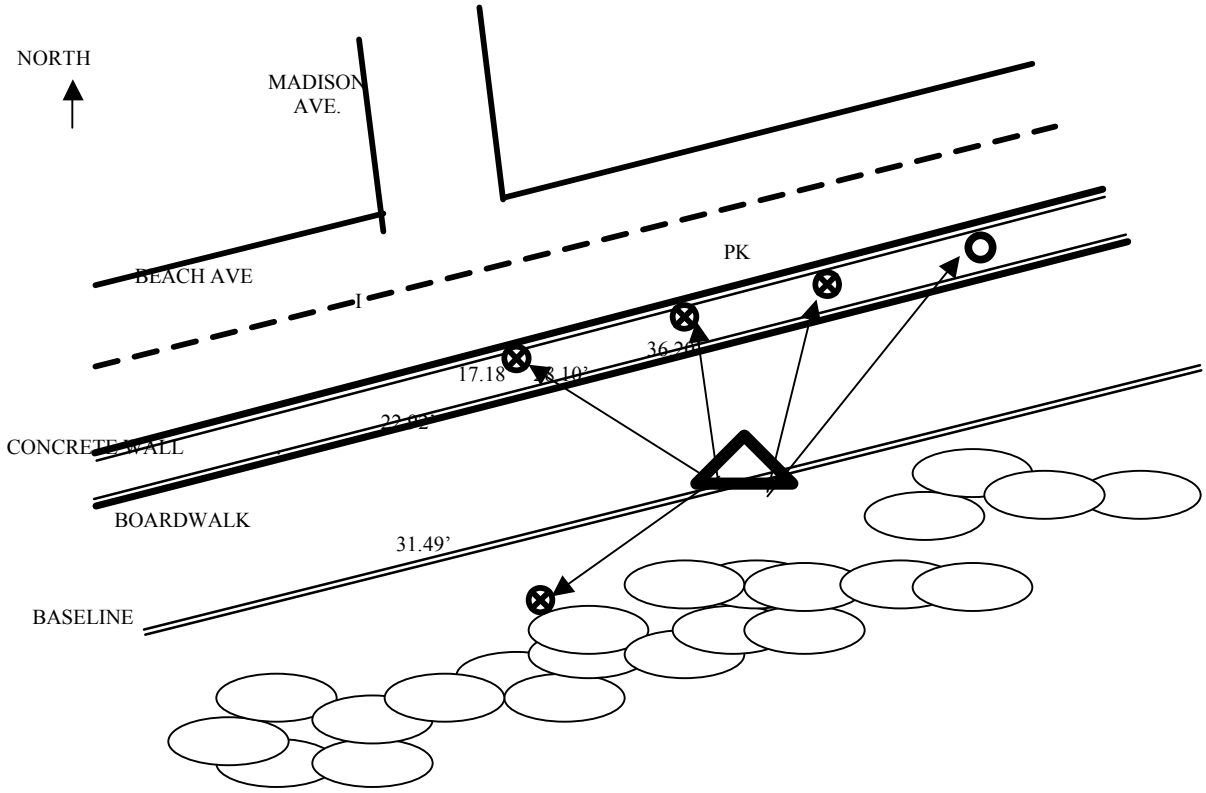
COUNTRY	TYPE OF MARK	STATION	
USA	(PK NAIL) ON BOARDWALK	128+08.64	
LOCALITY CAPEMAY NJ	STAMPING ON MARK	AGENCY (CAST IN MARKS) *Corps of Engineers*	ELEVATION (FT) 9.28
LATITUDE ***38 55'53.48049***	LONGITUDE ***74 54'38.17354***	DATUM NAD 83	DATUM NAVD 88
(NORTHING) **(FT)** 36021.42	**(EASTING)** **(FT)** 375327.69	GRID AND ZONE NEW JERSEY 2900	ESTABLISHED BY (AGENCY) TUGA
(NORTHING) **(FT)** (M)	**(EASTING)** **(FT)** (M)	GRID AND ZONE	DATE 1/2000 / ORDER GPS

TO OBTAIN GRID AZIMUTH, ADD ° ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) ° ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		

STATION 128+08.64 IS A P.K. NAIL IN BITUMINOUS BOARDWALK VICINITY OF INTERSECTION OF MADISON AVE AND BEACH AVE.
31.49 FEET NORTH EAST OF A CROSSCUT IN RIM MANHOLE IN BOARDWALK.
22.92 FEET EAST OF CROSSCUT ON TOP OF A CONCRETE WALL
28.10 FEET SOUTHWEST OF CROSSCUT ON TOP OF CONCRETE WALL
36.20 FEET SOUTH WEST OF PK NAIL IN CONCRETE WALL JOINT



SKETCH

DA FORM 1 OCT 64 1959 REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION
For use of this form, see TM 5-237; the proponent agnecy is TRADOC.

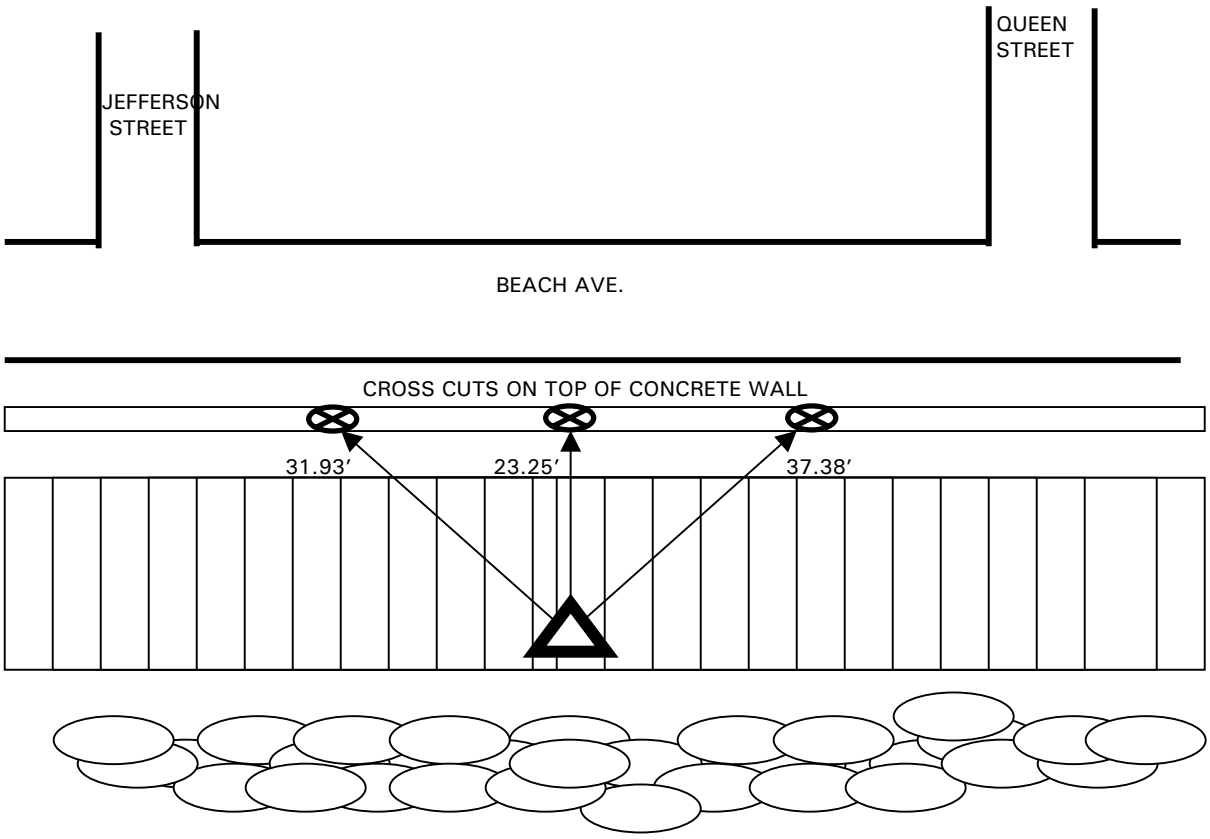
COUNTRY	TYPE OF MARK	STATION	
USA	PK NAIL IN BOARDWALK	138+09.14	
LOCALITY CAPE MAY NJ	STAMPING ON MARK	AGENCY (CAST IN MARKS) *Corps of Engineers*	ELEVATION (FT) 8.82
LATITUDE	LONGITUDE	DATUM NAD 83	DATUM NAVD 88
(NORTHING) **(FT)** 35825.84	**(EASTING)** **(FT)** 374346.49	GRID AND ZONE NJ 2900	ESTABLISHED BY (AGENCY) TVGA
(NORTHING) **(FT)** (M)	**(EASTING)** **(FT)** (M)	GRID AND ZONE	DATE SEPT 95 / ORDER GPS

TO OBTAIN GRID AZIMUTH, ADD ° ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) ° ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		

STATION 138+09.14 IS A PK NAIL IN BITUMINOUS BOARDWALK LOCATED IN THE VICINITY BETWEEN JEFFERSON STREET AND QUEEN STREET IN CAPE MAY NJ. 31.93 FEET SOUTH EAST OF CROSS CUT IN TOP OF CONCRETE WALL. 23.25 FEET SOUTHEAST SOUTH EAST OF CROSS CUT IN TOP OF CONCRETE WALL. 37.38 FEET SOUTHWEST OF CROSS CUT IN TOP OF CONCRETE WALL.



SKETCH

DA FORM 1 OCT 64 1959 REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION

For use of this form, see TM 5-237; the proponent agency is TRADOC.

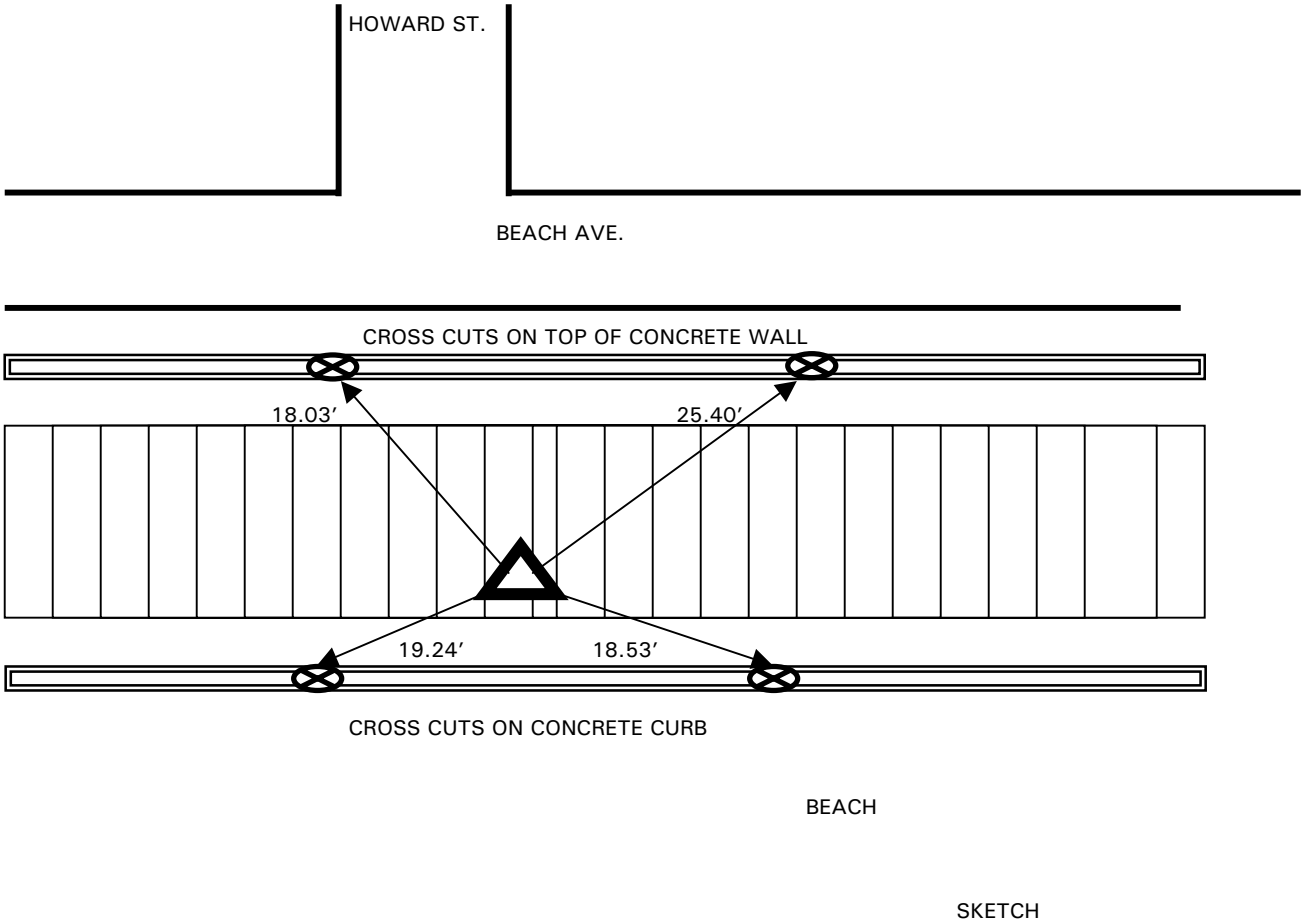
COUNTRY	TYPE OF MARK	STATION	
USA	PK NAIL IN BOARDWALK	145+06.40	
LOCALITY CAPE MAY NJ	STAMPING ON MARK	AGENCY (CAST IN MARKS) *Corps of Engineers*	ELEVATION (FT) 10.63
LATITUDE	LONGITUDE	DATUM NAD 83	DATUM NAVD 88
(NORTHING) (FT) 35682.96	(EASTING) (FT) 373664.03	GRID AND ZONE NJ 2900	ESTABLISHED BY (AGENCY) TVGA
(NORTHING) (FT) (M)	(EASTING) (FT) (M)	GRID AND ZONE	DATE: SEPT 95 / ORDER: GPS

TO OBTAIN GRID AZIMUTH, ADD ° ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) ° ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		

STATION 145+06.40 IS A PK NAIL IN BITUMINOUS BOARDWALK LOCATED IN THE VICINITY OF THE INTERSECTION OF HOWARD STREET AND BEACH AVE IN CAPE MAY NJ. THE STATION IS 18.03 FEET SOUTHEAST OF A CROSS CUT ON TOP OF THE CONCRETE WALL. 25.40 FEET SOUTHWEST OF CROSS CUT ON CONCRETE WALL, AND 18.53 FEET NORTH WEST OF CROSS CUT IN TOP CONCRETE CURB, 19.24 FEET NORTH EAST OF CROSS CUT IN TOP OF CONCRETE CURB.



SKETCH

DA FORM 1 OCT 64 1959 REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION
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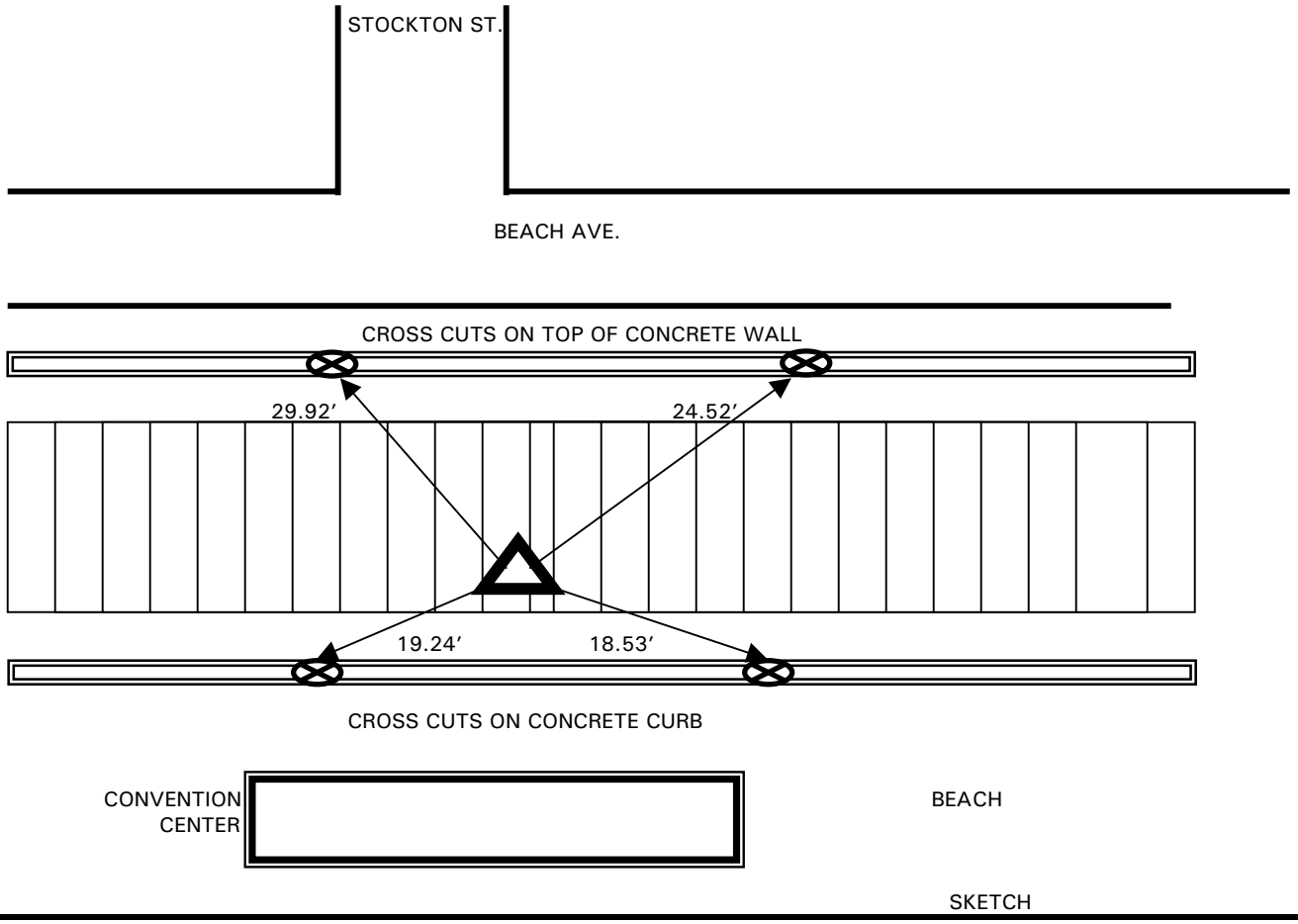
COUNTRY	TYPE OF MARK	STATION	
USA	PK NAIL IN BOARDWALK	148+09.27	
LOCALITY CAPE MAY NJ	STAMPING ON MARK	AGENCY (CAST IN MARKS) *Corps of Engineers*	ELEVATION (FT) 10.85
LATITUDE	LONGITUDE	DATUM NAD 83	DATUM NAVD 88
(NORTHING) **(FT)** 35632.06	**(EASTING)** **(FT)** 373365.46	GRID AND ZONE NJ 2900	ESTABLISHED BY (AGENCY) TVGA
(NORTHING) **(FT)** (M)	**(EASTING)** **(FT)** (M)	GRID AND ZONE	DATE SEPT 95 / ORDER GPS

TO OBTAIN GRID AZIMUTH, ADD ° ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) ° ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		

STATION 148+09.27 IS A PK NAIL IN BITUMINOUS BOARDWALK OPPOSITE CONVENTION CENTER, LOCATED IN THE VICINITY OF THE INTERSECTION OF STOCKTON STREET AND BEACH AVE IN CAPE MAY NJ. THE STATION IS 29.92 FEET SOUTHEAST OF A CROSS CUT ON TOP OF THE CONCRETE WALL. 24.52 FEET SOUTHWEST OF CROSS CUT ON CONCRETE WALL, AND 18.53 FEET NORTH WEST OF CROSS CUT IN TOP CONCRETE CURB, 19.54 FEET NORTH EAST OF CROSS CUT IN TOP OF CONCRETE CURB.



SKETCH

DA FORM 1 OCT 64 **1959** REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION
For use of this form, see TM 5-237; the proponent agnecy is TRADOC.

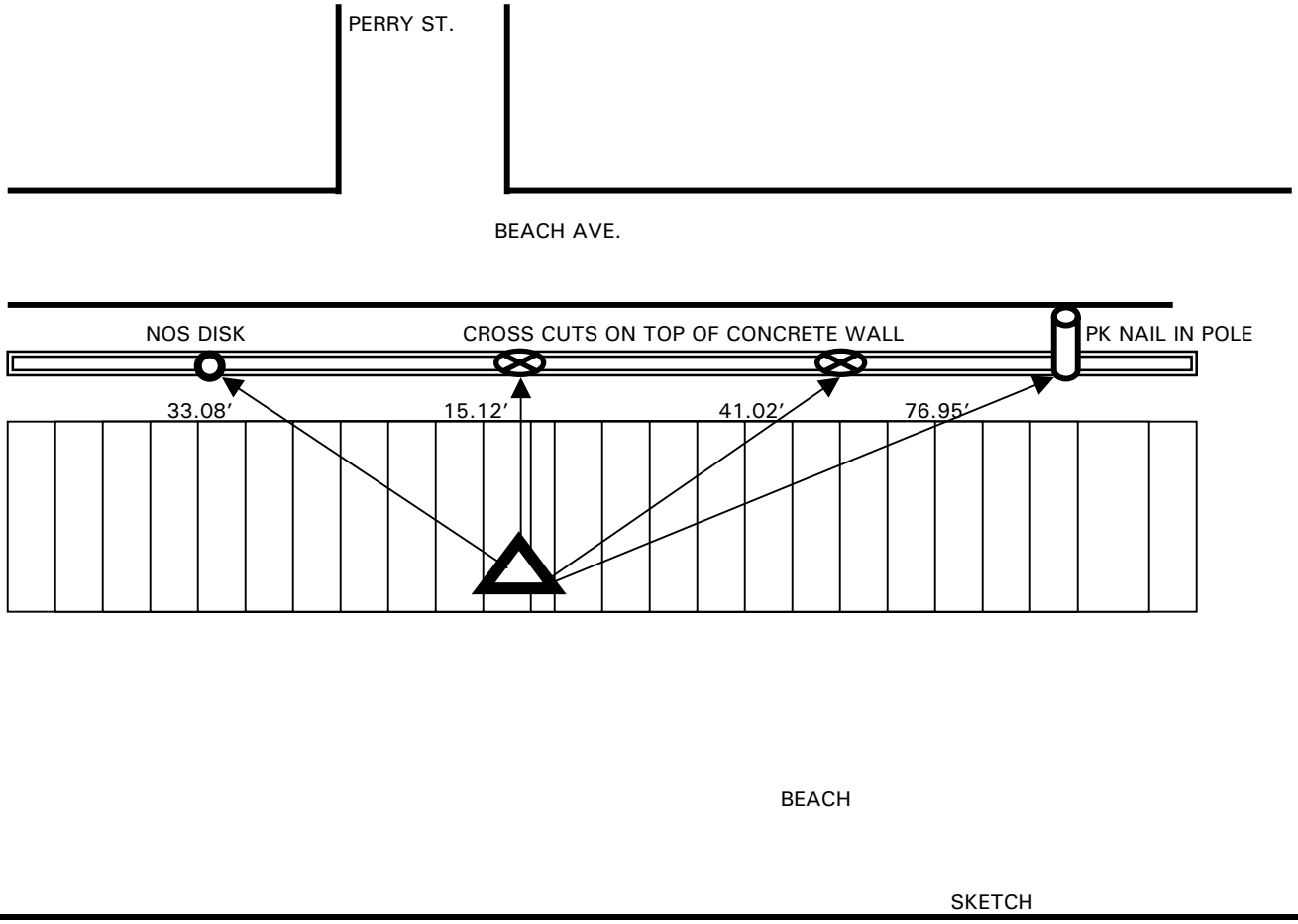
COUNTRY	TYPE OF MARK	STATION	
USA	PK NAIL IN BOARDWALK	163+50.46	
LOCALITY CAPE MAY NJ	STAMPING ON MARK	AGENCY (CAST IN MARKS) *Corps of Engineers*	ELEVATION (FT) 10.53
LATITUDE	LONGITUDE	DATUM NAD 83	DATUM NAVD 88
(NORTHING) **(FT)** 35556.02	**(EASTING)** **(FT)** 371826.15	GRID AND ZONE NJ 2900	ESTABLISHED BY (AGENCY) TVGA
(NORTHING) **(FT)** (M)	**(EASTING)** **(FT)** (M)	GRID AND ZONE	DATE SEPT 95 / ORDER GPS

TO OBTAIN GRID AZIMUTH, ADD ° ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) ° ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		

STATION 163+50.46 IS A PK NAIL IN BITUMINOUS BOARDWALK, LOCATED IN THE VICINITY OF THE INTERSECTION OF PERRY STREET AND BEACH AVE IN CAPE MAY NJ. THE STATION IS 33.08 FEET SOUTHEAST OF A N.O.S. DISC SET ON TOP OF THE CONCRETE WALL. 15.12 FEET SOUTH OF CROSS CUT ON CONCRETE WALL, AND 41.02 FEET SOUTH WEST OF CROSS CUT IN TOP CONCRETE CURB, 76.95 FEET SOUTH WEST OF PK NAIL IN POWER POLE #23557 LOCATED ON TOP OF BOARDWALK.



SKETCH

DA FORM 1 OCT 64 **1959** REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION
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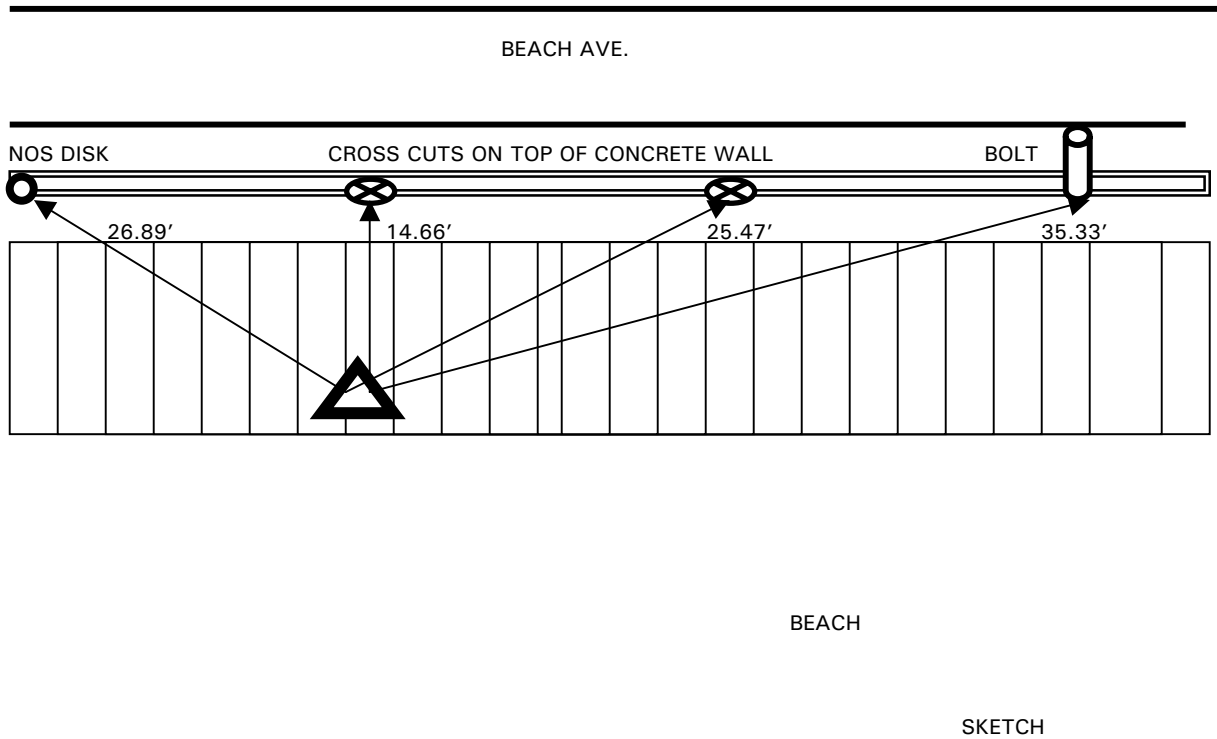
COUNTRY	TYPE OF MARK	STATION	
USA	PK NAIL IN BOARDWALK	196+13.23	
LOCALITY CAPE MAY NJ	STAMPING ON MARK	AGENCY (CAST IN MARKS) *Corps of Engineers*	ELEVATION (FT) 10.76
LATITUDE *38 55′47.43970*	LONGITUDE *74 56′03.71926*	DATUM NAD 83	DATUM NAVD 88
(NORTHING) **(FT)** 35441.64	**(EASTING)** **(FT)** 368565.39	GRID AND ZONE NJ 2900	ESTABLISHED BY (AGENCY) TVGA
(NORTHING) **(FT)** (M)	**(EASTING)** **(FT)** (M)	GRID AND ZONE	DATE 1/2000 / ORDER GPS

TO OBTAIN GRID AZIMUTH, ADD ° ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) ° ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		

STATION 196+13.23 IS A PK NAIL IN BITUMINOUS BOARDWALK, LOCATED IN THE VICINITY THE WEST END OF BEACH AVE IN CAPE MAY NJ. THE STATION IS 26.89 FEET SOUTHEAST OF A N.O.S. DISC SET ON TOP OF THE CONCRETE WALL. 14.66 FEET SOUTH OF CROSS CUT ON CONCRETE WALL, AND 25.47 FEET SOUTH WEST OF CROSS CUT IN TOP CONCRETE WALL, 35.33 FEET SOUTH WEST OF CROSS CUT IN TOP OF CUT OFF LAG BOLT SET IN CONCRETE WALL.



SKETCH

DA FORM 1 OCT 64 1959 REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION

For use of this form, see TM 5-237; the proponent agnecy is TRADOC.

LOWER CAPE MAY MEADOWS AND CAPE MAY POINT
SURVEY BASELINE No. 2

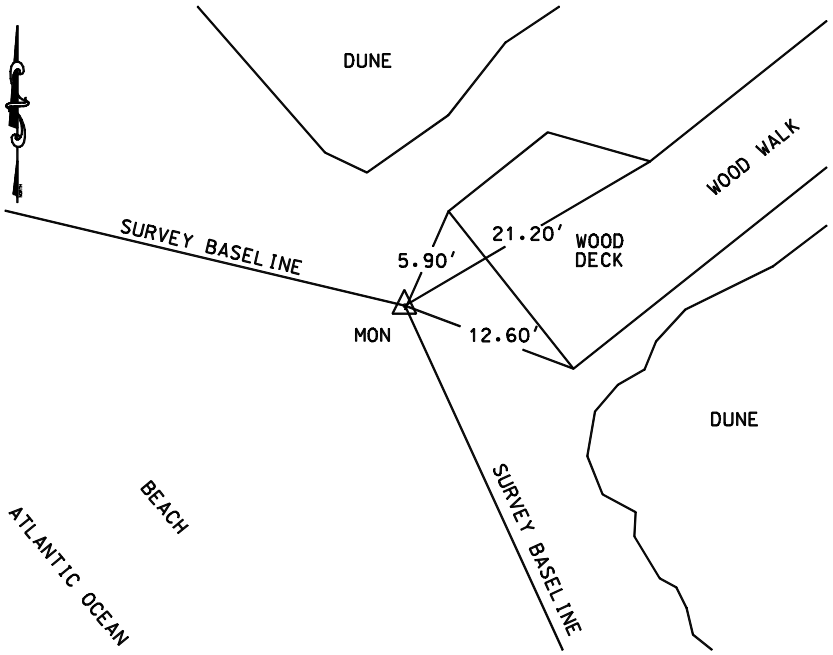
COUNTRY	TYPE OF MARK	STATION	
USA	***MONUMENT***	***BASELINE P.I. 7+32.62***	
LOCALITY	STAMPING ON MARK	AGENCY (CAST IN MARKS)	ELEVATION **(FT)**
CAPE MAY, NEW JERSEY	***CMP 1 2000***	***USACE***	***14.77*** (M)
LATITUDE	LONGITUDE	DATUM	DATUM
38º 55' 54.00753"	***74º 56' 7.62556"***	***NAD 83***	***NAVD 88***
(NORTHING) (EASTING) **(FT)**	**(EASTING)** (NORTHING) **(FT)**	GRID AND ZONE	ESTABLISHED BY (AGENCY)
36,107.53 (M)	***368,259.90*** (M)	***N. J. STATE 2900***	***TVGA***
(NORTHING) (EASTING) (FT)	**(EASTING)** (NORTHING) (FT)	GRID AND ZONE	DATE / ORDER
11,005.597 **(M)**	***112,245.842*** **(M)**	***N.J. STATE 2900***	***July 2000*** / ***GPS***

TO OBTAIN GRID AZIMUTH, ADD º ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) º ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	º ' "	º ' "		

STATION IS APPROXIMATELY 370' ± FROM THE END OF MT. VERNON AVENUE, IN CAPE MAY, NEW JERSEY.



SKETCH

DA FORM 1 OCT 64 **1959** REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION

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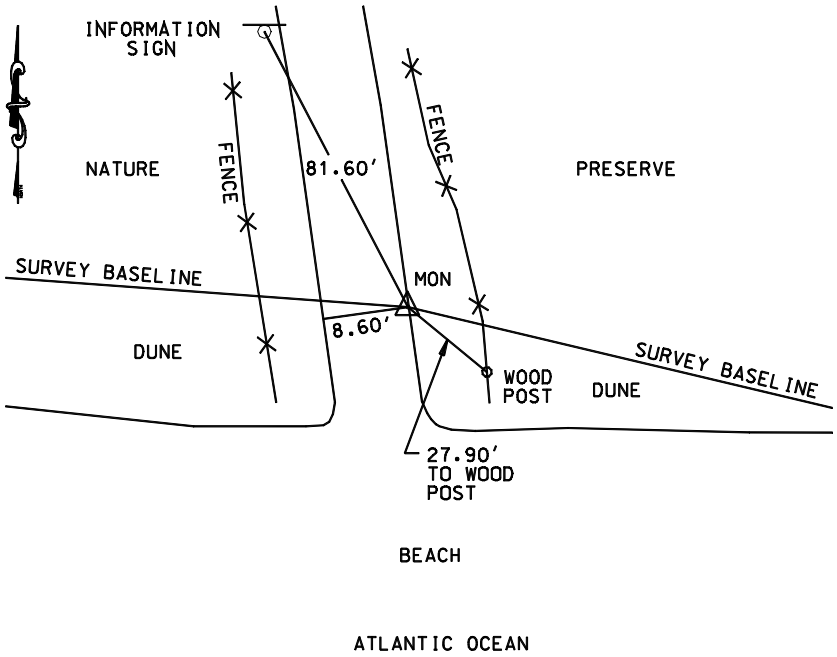
COUNTRY	TYPE OF MARK	STATION	
USA	***MONUMENT***	***BASELINE P.I. 32+47.60***	
LOCALITY	STAMPING ON MARK	AGENCY (CAST IN MARKS)	ELEVATION **(FT)**
CAPE MAY, NEW JERSEY	***CMP 2 2000***	***USACE***	***14.29*** (M)
LATITUDE	LONGITUDE	DATUM	DATUM
38° 55' 59.6316"	***74° 56' 38.62951"***	***NAD 83***	***NAVD 88***
(NORTHING) (EASTING) **(FT)**	**(EASTING)** (NORTHING) **(FT)**	GRID AND ZONE	ESTABLISHED BY (AGENCY)
36,688.29 (M)	***365,812.90*** (M)	***N. J. STATE 2900***	***TVGA***
(NORTHING) (EASTING) (FT)	**(EASTING)** (NORTHING) (FT)	GRID AND ZONE	DATE / ORDER
11,182.613 **(M)**	***111,499.995*** **(M)**	***N.J. STATE 2900***	***July 2000*** / ***GPS***

TO OBTAIN GRID AZIMUTH, ADD ° ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) ° ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		

FROM THE INTERSECTION OF LAFAYETTE STREET AND SUNSET BOULEVARD, TRAVEL WEST ON SUNSET BOULEVARD TO 16TH AVENUE. AT THE END OF 16TH AVENUE, STATION IS APPROXIMATELY 50' ± FROM END OF ROAD.



SKETCH

DA FORM 1 OCT 64 1959 REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION

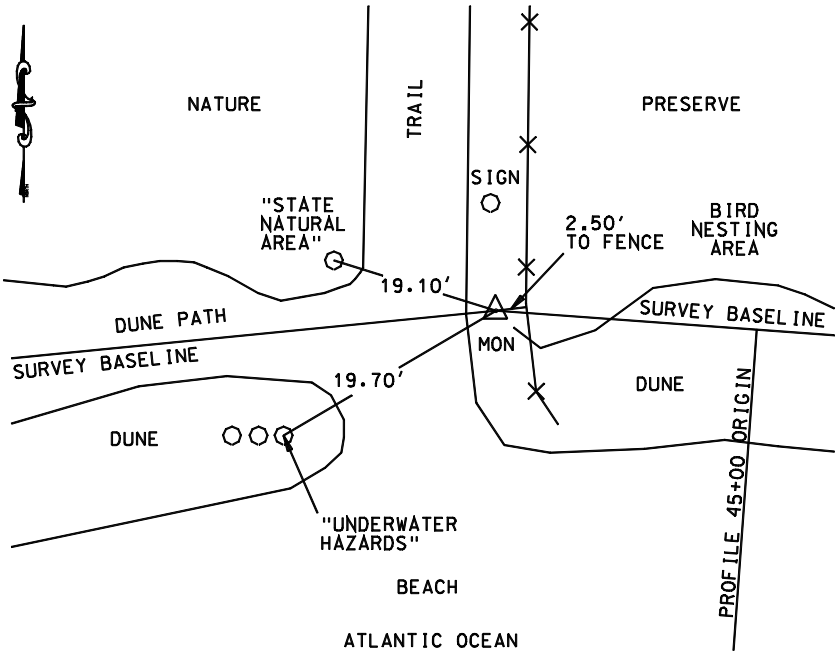
For use of this form, see TM 5-237; the proponent agency is TRADOC.

COUNTRY *USA*	TYPE OF MARK *MONUMENT*	STATION *BASELINE P.I. 45+82.75*	
LOCALITY *CAPE MAY, NEW JERSEY*	STAMPING ON MARK *CMP 3 2000*	AGENCY (CAST IN MARKS) *USACE*	ELEVATION (FT) *8.19* (M)
LATITUDE *38° 56' 0.52291"*	LONGITUDE *74° 56' 55.48866"*	DATUM *NAD 83*	DATUM *NAVD 88*
(NORTHING) (EASTING) **(FT)** *36,784.98* (M)	**(EASTING)** (NORTHING) **(FT)** *364,481.25* (M)	GRID AND ZONE *N. J. STATE 2900*	ESTABLISHED BY (AGENCY) *TVGA*
(NORTHING) (EASTING) (FT) *11,212.084* **(M)**	**(EASTING)** (NORTHING) (FT) *111,094.107* **(M)**	GRID AND ZONE *N.J. STATE 2900*	DATE *July 2000* / ORDER *GPS*

TO OBTAIN GRID AZIMUTH, ADD ° ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) ° ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		



SKETCH

DA FORM 1 OCT 64 1959 REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION

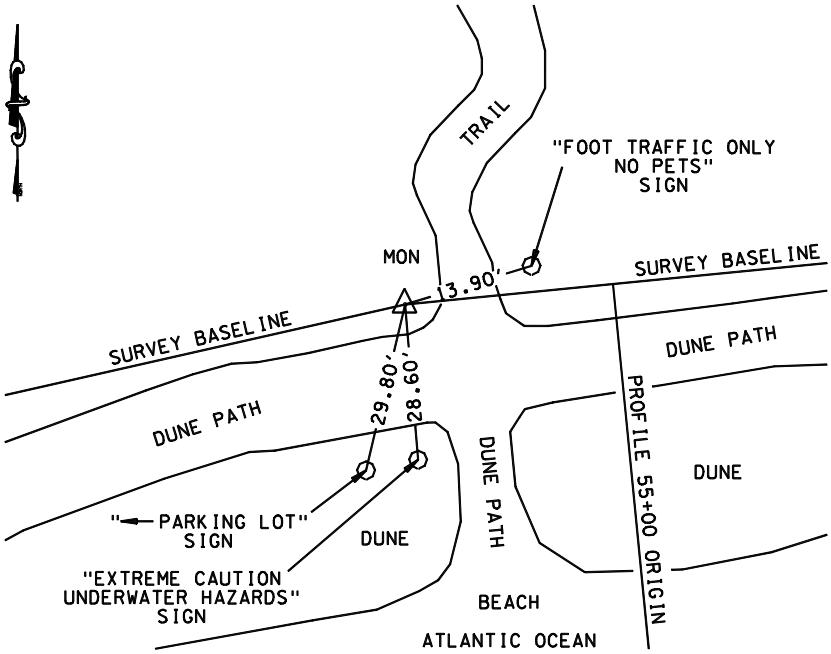
For use of this form, see TM 5-237; the proponent agency is TRADOC.

COUNTRY *USA*	TYPE OF MARK *MONUMENT*	STATION *BASELINE P.I. 55+65.87*	
LOCALITY *CAPE MAY, NEW JERSEY*	STAMPING ON MARK *CMP 4 2000*	AGENCY (CAST IN MARKS) *USACE*	ELEVATION **(FT)** *6.19* (M)
LATITUDE *38° 55′ 59.52529″*	LONGITUDE *74° 57′ 7.86526″*	DATUM *NAD 83*	DATUM *NAVD 88*
(NORTHING) (EASTING) **(FT)** *36,688.89* (M)	**(EASTING)** (NORTHING) **(FT)** *363,502.84* (M)	GRID AND ZONE *N. J. STATE 2900*	ESTABLISHED BY (AGENCY) *TVGA*
(NORTHING) (EASTING) (FT) *11,182.796* **(M)**	**(EASTING)** (NORTHING) (FT) *110,795.887* **(M)**	GRID AND ZONE *N.J. STATE 2900*	DATE *July 2000* / ORDER *GPS*

TO OBTAIN GRID AZIMUTH, ADD ° ′ ″ TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) ° ′ ″ TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ′ ″	° ′ ″		



SKETCH

DA FORM 1 OCT 64 1959 REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION

For use of this form, see TM 5-237; the proponent agency is TRADOC.

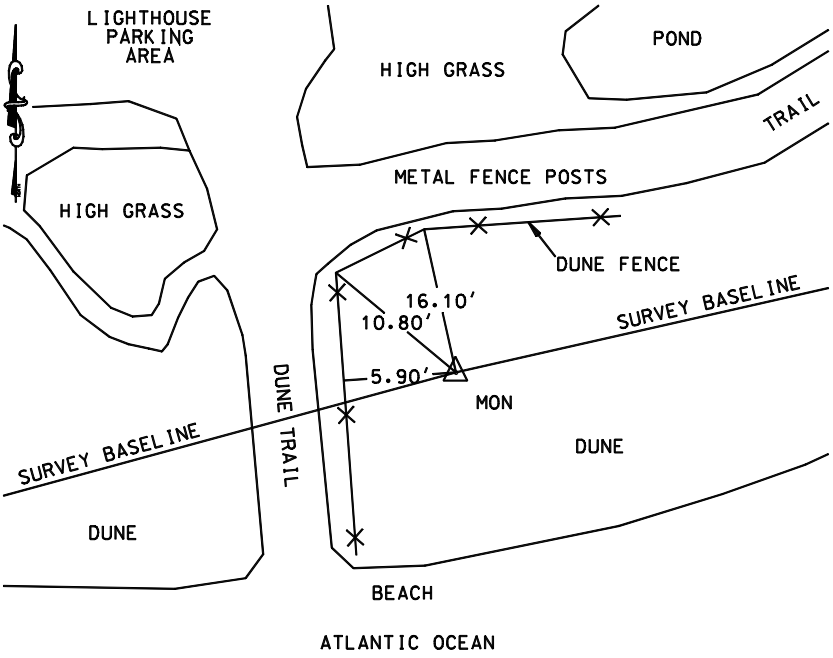
COUNTRY	TYPE OF MARK	STATION	
USA	*MONUMENT*	*BASELINE P.I. 71+48.53*	
LOCALITY	STAMPING ON MARK	AGENCY (CAST IN MARKS)	ELEVATION (FT)
CAPE MAY, NEW JERSEY	*CMP 5 2000*	*USACE*	*12.10* (M)
LATITUDE	LONGITUDE	DATUM	DATUM
38º 55' 55.99807"	*74º 57' 27.37947"*	*NAD 83*	*NAVD 88*
(NORTHING) (EASTING) **(FT)**	**(EASTING)** (NORTHING) **(FT)**	GRID AND ZONE	ESTABLISHED BY (AGENCY)
36,339.76 (M)	*361,959.17* (M)	*N. J. STATE 2900*	*TVGA*
(NORTHING) (EASTING) (FT)	**(EASTING)** (NORTHING) (FT)	GRID AND ZONE	DATE / ORDER
11,076.381 **(M)**	*110,325.376* **(M)**	*N.J. STATE 2900*	*July 2000* / *GPS*

TO OBTAIN GRID AZIMUTH, ADD º ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) º ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	º ' "	º ' "		

TRAVELING SOUTHEAST ON LIGHTHOUSE AVENUE TURN LEFT AT LEHIGH AVENUE , FOLLOW TO END, TURN RIGHT (TOWARD BEACH) AND STOP WHEN WALK TO BEACH BEGINS. FOLLOW WALK SOUTHEAST TO BEACH AND DUNE FENCE. TRAVEL EAST ALONG DUNE FENCE APPROXIMATELY 440' ± TO THE STATION.



SKETCH

DA FORM 1 OCT 64 1959 REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION

For use of this form, see TM 5-237; the proponent agency is TRADOC.

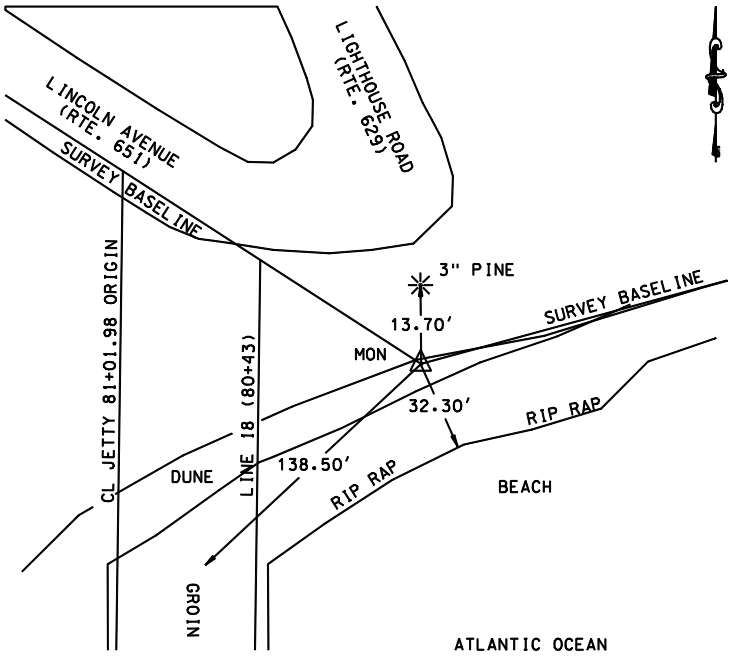
COUNTRY *USA*	TYPE OF MARK *MONUMENT*	STATION *BASELINE P.I. 79+73.78*	
LOCALITY *CAPE MAY, NEW JERSEY*	STAMPING ON MARK *CMP 6 2000*	AGENCY (CAST IN MARKS) *USACE*	ELEVATION **(FT)** *12.93* (M)
LATITUDE *38° 55' 53.81462"*	LONGITUDE *74° 57' 37.44265"*	DATUM *NAD 83*	DATUM *NAVD 88*
(NORTHING) (EASTING) **(FT)** *36,122.88* (M)	**(EASTING)** (NORTHING) **(FT)** *361,162.92* (M)	GRID AND ZONE *N. J. STATE 2900*	ESTABLISHED BY (AGENCY) *TVGA*
(NORTHING) (EASTING) (FT) *11,010.276* **(M)**	**(EASTING)** (NORTHING) (FT) *110,082.678* **(M)**	GRID AND ZONE *N.J. STATE 2900*	DATE *July 2000* ORDER *GPS*

TO OBTAIN GRID AZIMUTH, ADD ° ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) ° ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		

TO REACH STATION "CMP 6", TRAVEL 65'± SOUTH (TOWARD OCEAN) FROM THE INTERSECTION OF LINCOLN AVENUE AND LIGHTHOUSE AVENUE.



SKETCH

DA FORM 1 OCT 64 1959 REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION

For use of this form, see TM 5-237; the proponent agency is TRADOC.

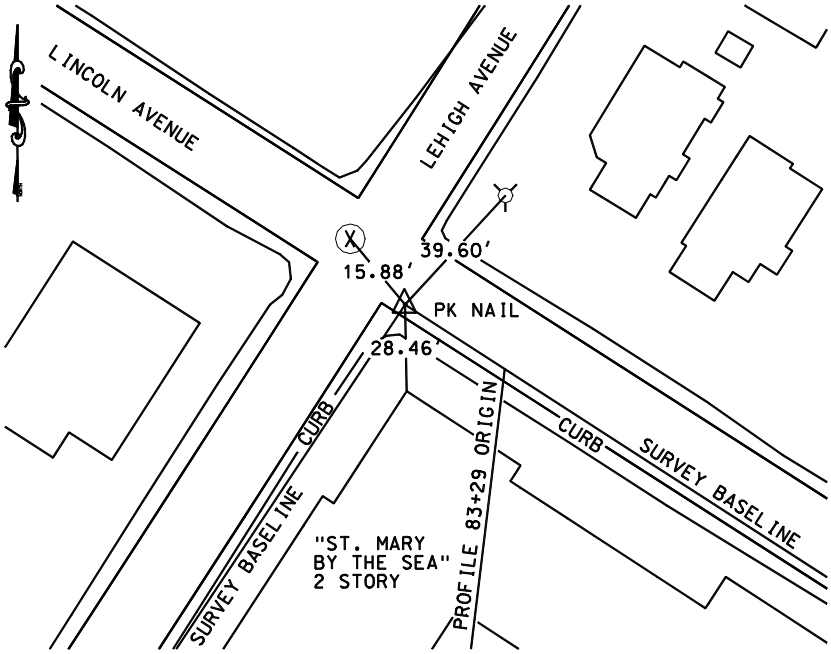
COUNTRY *USA*	TYPE OF MARK *PK NAIL*	STATION *BASELINE P.I. 83+66.19*	
LOCALITY *CAPE MAY, NEW JERSEY*	STAMPING ON MARK *NONE*	AGENCY (CAST IN MARKS) *USACE*	ELEVATION (FT) (M) *6.51*
LATITUDE *38° 55′ 55.90124″*	LONGITUDE *74° 57′ 41.62906″*	DATUM *NAD 83*	DATUM *NAVD 88*
(NORTHING) (EASTING) (FT) (M) *36,335.64*	(EASTING) (NORTHING) (FT) (M) *360,833.20*	GRID AND ZONE *N. J. STATE 2900*	ESTABLISHED BY (AGENCY) *TVGA*
(NORTHING) (EASTING) (FT) (M) *11,075.125*	(EASTING) (NORTHING) (FT) (M) *109,982.179*	GRID AND ZONE *N.J. STATE 2900*	DATE: *July 2000* ORDER: *RTK*

TO OBTAIN GRID AZIMUTH, ADD ° ′ ″ TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) ° ′ ″ TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ′ ″	° ′ ″		

THE STATION IS A PK NAIL SET AT THE CURB LINE OF SOUTHEAST CORNER OF INTERSECTION OF LINCOLN AVENUE AND LEHIGH AVENUE.



SKETCH

DA FORM 1 OCT 64 1959 REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION

For use of this form, see TM 5-237; the proponent agency is TRADOC.

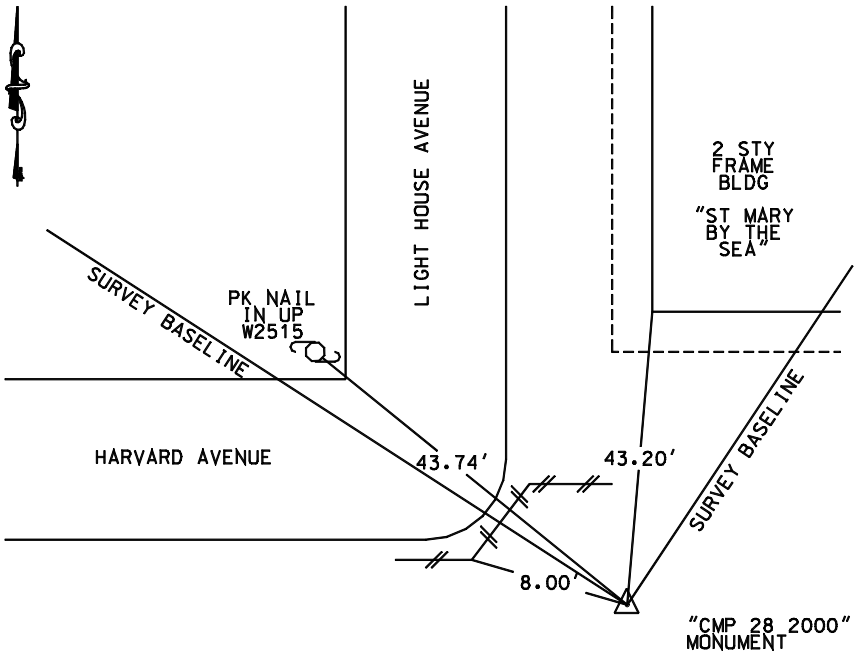
COUNTRY *USA*	TYPE OF MARK *MONUMENT*	STATION *BASELINE P.I. 86+10.48*	
LOCALITY *CAPE MAY, NEW JERSEY*	STAMPING ON MARK *CMP 28 2000*	AGENCY (CAST IN MARKS) *USACE*	ELEVATION (FT) *9.54* (M)
LATITUDE *38° 55' 53.88379"*	LONGITUDE *74° 57' 43.32819"*	DATUM *NAD 83*	DATUM *NAVD 88*
(NORTHING) (EASTING) (FT) *36132.23* (M)	(EASTING) (NORTHING) (FT) *360697.91* (M)	GRID AND ZONE *N.J. STATE 2900*	ESTABLISHED BY (AGENCY) *TVGA*
(NORTHING) (EASTING) (FT) *11013.126* (M)	(EASTING) (NORTHING) (FT) *109940.943* (M)	GRID AND ZONE *N.J. STATE 2900*	DATE *July 2000* / ORDER *GPS*

TO OBTAIN GRID AZIMUTH, ADD ° ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) ° ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		

TO REACH STATION TRAVEL TO THE INTERSECTION OF LIGHT HOUSE AVENUE AND HARVARD AVENUE.
THE STATION IS A STANDARD MONUMENT SET IN CONCRETE AND LOCATED 10'± SOUTH OF THE INTERSECTION, IN CAPE MAY, NEW JERSEY.



SKETCH

DA FORM 1 OCT 64 1959 REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION

For use of this form, see TM 5-237; the proponent agency is TRADOC.

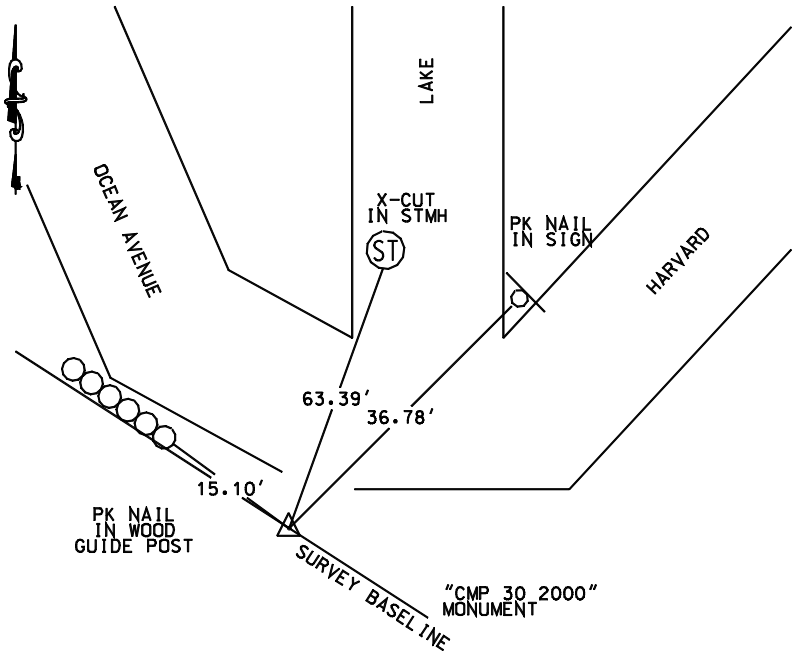
COUNTRY *USA*	TYPE OF MARK *MONUMENT*	STATION *BASELINE P.I. 100+30.93*	
LOCALITY *CAPE MAY, NEW JERSEY*	STAMPING ON MARK *CMP 30 2000*	AGENCY (CAST IN MARKS) *USACE*	ELEVATION (FT) (M) *6.70*
LATITUDE *38° 56' 1.43574"*	LONGITUDE *74° 57' 58.48352"*	DATUM *NAD 83*	DATUM *NAVD 88*
(NORTHING) (EASTING) (FT) (M) *36902.30*	(EASTING) (NORTHING) (FT) (M) *359504.32*	GRID AND ZONE *N.J. STATE 2900*	ESTABLISHED BY (AGENCY) *TVGA*
(NORTHING) (EASTING) (FT) (M) *11247.844*	(EASTING) (NORTHING) (FT) (M) *109577.136*	GRID AND ZONE *N.J. STATE 2900*	DATE: *July 2000* ORDER: *GPS*

TO OBTAIN GRID AZIMUTH, ADD ° ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) ° ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		

THE STATION IS A STANDARD DISK SET IN CONCRETE AT THE INTERSECTION OF HARVARD, LAKE, AND OCEAN AVENUE IN CAPE MAY, NEW JERSEY.



SKETCH

DA FORM 1 OCT 64 1959 REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION

For use of this form, see TM 5-237; the proponent agency is TRADOC.

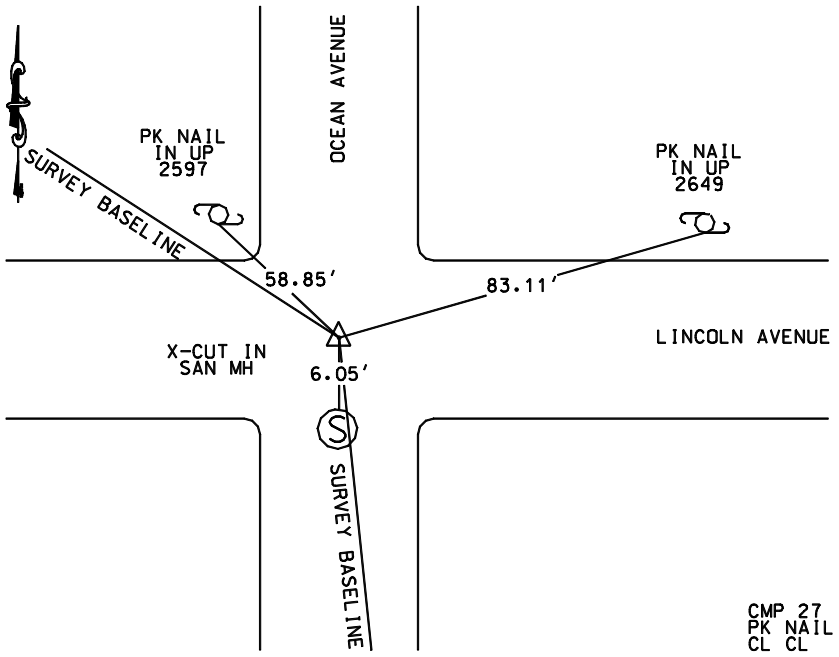
COUNTRY *USA*	TYPE OF MARK *PK NAIL*	STATION *BASELINE P.I. 103+44.11*	
LOCALITY *CAPE MAY, NEW JERSEY*	STAMPING ON MARK *NONE*	AGENCY (CAST IN MARKS) *USACE*	ELEVATION (FT) (M) *6.65*
LATITUDE *38° 56' 4.51343"*	LONGITUDE *74° 57' 58.91108"*	DATUM *NAD 83*	DATUM *NAVD 88*
(NORTHING) (EASTING) (FT) (M) *37213.82*	(EASTING) (NORTHING) (FT) (M) *359472.13*	GRID AND ZONE *N.J. STATE 2900*	ESTABLISHED BY (AGENCY) *TVGA*
(NORTHING) (EASTING) (FT) (M) *11342.795*	(EASTING) (NORTHING) (FT) (M) *109567.324*	GRID AND ZONE *N.J. STATE 2900*	DATE: *July 2000* / ORDER: *RTK*

TO OBTAIN GRID AZIMUTH, ADD ° ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) ° ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		

THE STATION IS A PK NAIL AT THE CENTERLINE INTERSECTIONS OF LINCOLN AVENUE AND OCEAN AVENUE IN THE TOWN OF CAPE MAY, NEW JERSEY.



SKETCH

DA FORM 1 OCT 64 1959 REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION

For use of this form, see TM 5-237; the proponent agency is TRADOC.

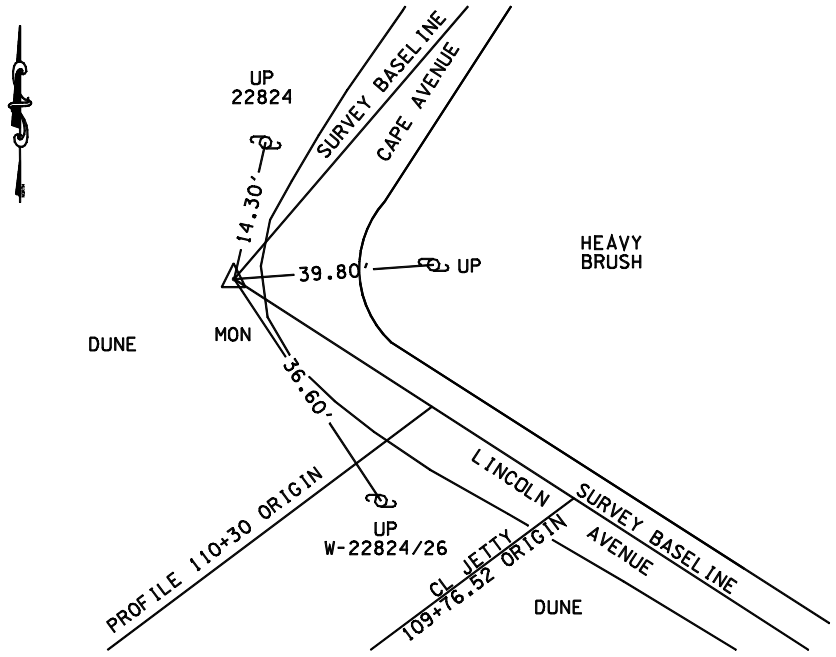
COUNTRY	TYPE OF MARK	STATION	
USA	***MONUMENT***	***BASELINE P.I. 111+04.57***	
LOCALITY	STAMPING ON MARK	AGENCY (CAST IN MARKS)	ELEVATION **(FT)**
CAPE MAY, NEW JERSEY	***CMP 7 2000***	***USACE***	***10.59*** (M)
LATITUDE	LONGITUDE	DATUM	DATUM
38º 56' 8.55526"	***74º 58' 7.02611"***	***NAD 83***	***NAVD 88***
(NORTHING) (EASTING) **(FT)**	**(EASTING)** (NORTHING) **(FT)**	GRID AND ZONE	ESTABLISHED BY (AGENCY)
37,625.99 (M)	***358,833.05*** (M)	***N. J. STATE 2900***	***TVGA***
(NORTHING) (EASTING) (FT)	**(EASTING)** (NORTHING) (FT)	GRID AND ZONE	DATE / ORDER
11,468.425 **(M)**	***109,372.532*** **(M)**	***N.J. STATE 2900***	***July 2000*** / ***GPS***

TO OBTAIN GRID AZIMUTH, ADD º ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) º ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	º ' "	º ' "		

STATION IS LOCATED ON THE WEST SIDE OF CAPE AVENUE AND LINCOLN AVENUE INTERSECTION, IN CAPE MAY, NEW JERSEY.



SKETCH

DA FORM 1 OCT 64 **1959** REPLACES DA FORMS 1959 AND 1960, 1FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION

For use of this form, see TM 5-237; the proponent agency is TRADOC.

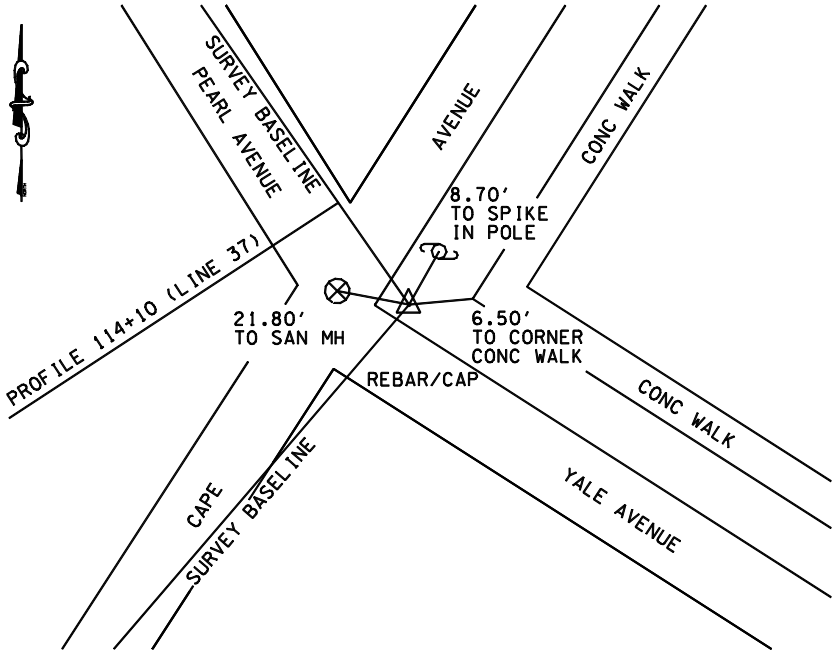
COUNTRY	TYPE OF MARK	STATION	
USA	*REBAR AND CAP*	*BASELINE P.I. 113+71.02*	
LOCALITY	STAMPING ON MARK	AGENCY (CAST IN MARKS)	ELEVATION (FT)
CAPE MAY, NEW JERSEY	*NONE*	*USACE*	*7.63* (M)
LATITUDE	LONGITUDE	DATUM	DATUM
38° 56' 10.56288"	*74° 58' 4.84339"*	*NAD 83*	*NAVD 88*
(NORTHING) (EASTING) **(FT)**	**(EASTING)** (NORTHING) **(FT)**	GRID AND ZONE	ESTABLISHED BY (AGENCY)
37,828.20 (M)	*359,006.55* (M)	*N. J. STATE 2900*	*TVGA*
(NORTHING) (EASTING) (FT)	**(EASTING)** (NORTHING) (FT)	GRID AND ZONE	DATE / ORDER
11,530.058 **(M)**	*109,425.415* **(M)**	*N.J. STATE 2900*	*July 2000* / *GPS*

TO OBTAIN GRID AZIMUTH, ADD ° ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD) (SUB) ° ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC) (GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		

STATION IS LOCATED ON THE EAST SIDE OF INTERSECTION WHERE PEARL AVENUE AND YALE AVENUE INTERSECT WITH CAPE AVENUE IN CAPE MAY, NEW JERSEY.



SKETCH

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DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION

For use of this form, see TM 5-237; the proponent agency is TRADOC.

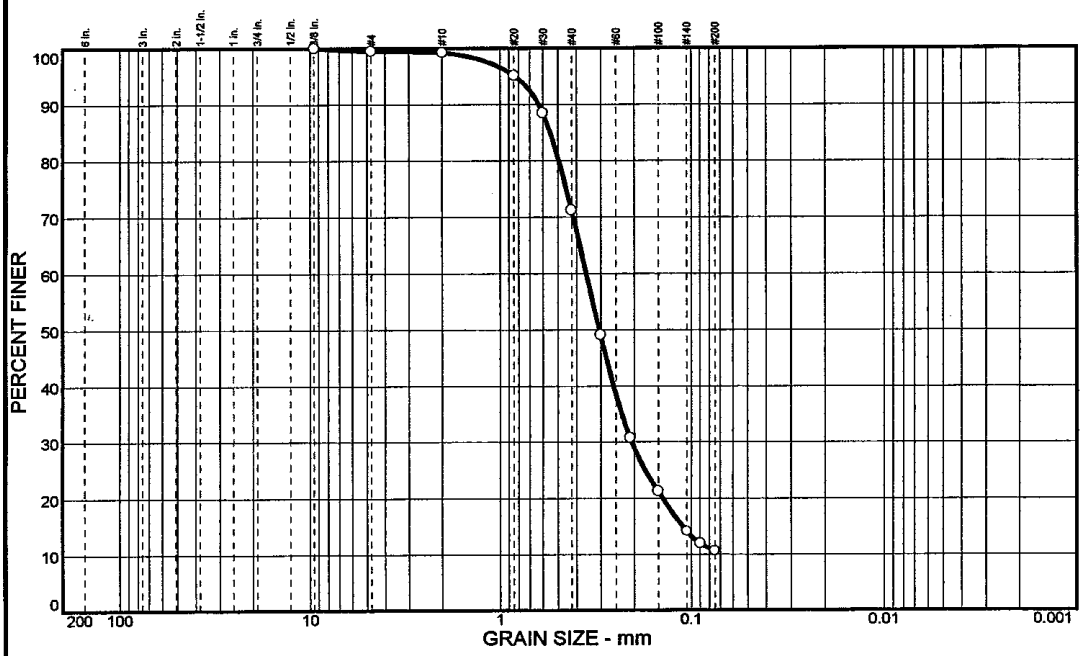
BEACH FILL

Cape May, NJ

TEST BORING HOLE COMPOSITE GRADATIONS

Hole No.	Sum Sample Lengths(ft)	Percent Passing - Sieve Number 4	10	20	40	60	100	200
NJV-58	10.3	93.5	85.0	74.3	47.7	30.4	22.1	13.0
NJV-59	18.0	84.7	78.7	66.6	46.4	31.2	20.5	10.7
NJV-60	17.0	97.8	92.5	79.7	58.1	38.6	27.0	09.9
NJV-61	19.6	96.5	92.2	76.6	49.8	28.9	15.9	07.2
NJV-62	18.0	97.0	93.3	85.5	72.7	54.5	25.1	14.9
NJV-63	19.6	94.6	86.6	73.6	53.9	31.5	1 5.2	10.5
NJV-67	18.0	96.9	92.2	80.8	57.9	36.0	1-7.1	12.9
NJV-68	13.5	86.0	82.4	75.0	62.7	51.3	39.5	12.0
NJV-69	14.5	96.6	93.5	82.8	52.5	36.4	18.8	09.4
NJV-70	18.5	95.4	92.8	86.2	72.5	51.8	29.3	17.9
NJV-73	19.0	88.7	82.8	73.1	53.8	27.8	15.6	09.0
NJV-74	18.8	94.8	89.6	78.6	53.0	30.2	17.9	11.7
NJV-77	19.6	94.0	89.3	78.3	57.9	40.9	26.9	14.3
NJV-78	19.8	94.4	91.2	80.8	58.6	36.5	21.4	09.8

PARTICLE SIZE DISTRIBUTION REPORT NJV-476



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
O		0.5	88.8	10.7		SP-SM			

SIEVE inches size	PERCENT FINER O		
3/8	100.0		
	GRAIN SIZE		
D_{60}	0.356		
D_{30}	0.206		
D_{10}			
	COEFFICIENTS		
C_c			
C_u			

SIEVE number size	PERCENT FINER O		
#4	99.5		
#10	99.3		
#20	95.2		
#30	88.5		
#40	71.3		
#50	49.1		
#70	30.7		
#100	21.3		
#140	14.2		
#170	12.0		
#200	10.7		

SOIL DESCRIPTION

O Tan/gray fine SAND, some medium sand, little silt, trace gravel.

REMARKS:

O

O Source: NJV476 Sample No.: S-5 Elev./Depth: 12.1'-17.2'

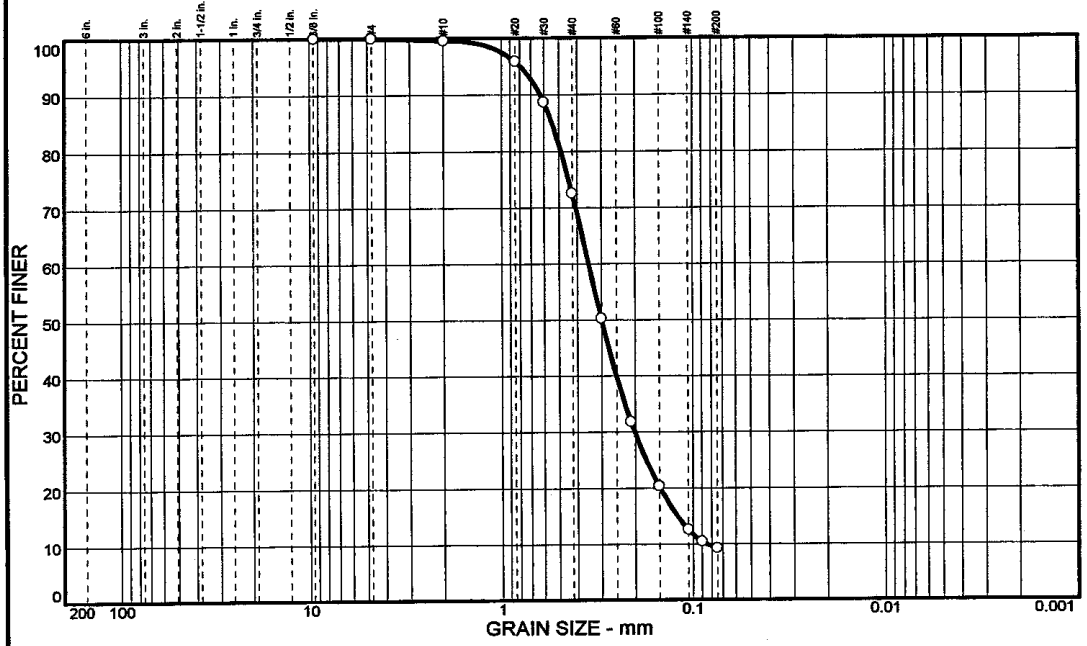
DUFFIELD ASSOCIATES
5400 LIMESTONE ROAD
WILMINGTON, DELAWARE 19808-1232
TEL. (302) 239-6634 FAX (302) 239-8485
E-MAIL: DUFFIELD@DUFFNET.COM

Client: U.S. Army Corps of Engineers

Project: Vibrocoring, New Jersey Coast, Cape May Inlet PED, Contract # DACW-61-9-D-0008, Task Order #8

Project No.: 3769.GI Date/Chk'd by: June 1999/WHS

PARTICLE SIZE DISTRIBUTION REPORT NJV-477R2



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
O			90.7	9.3		SP-SM			

SIEVE inches size	PERCENT FINER O		
3/8	100.0		
	GRAIN SIZE		
D_{60}	0.349		
D_{30}	0.201		
D_{10}	0.0846		
	COEFFICIENTS		
C_c	1.37		
C_u	4.12		

SIEVE number size	PERCENT FINER O		
#4	100.0		
#10	99.6		
#20	95.9		
#30	88.7		
#40	72.6		
#50	50.3		
#70	31.8		
#100	20.4		
#140	12.6		
#170	10.5		
#200	9.3		

SOIL DESCRIPTION

O Gray fine SAND, some medium sand, trace silt.

REMARKS:

O

O Source: NJV477R2 Sample No.: S-2 Elev./Depth: 17.3'-19.3'

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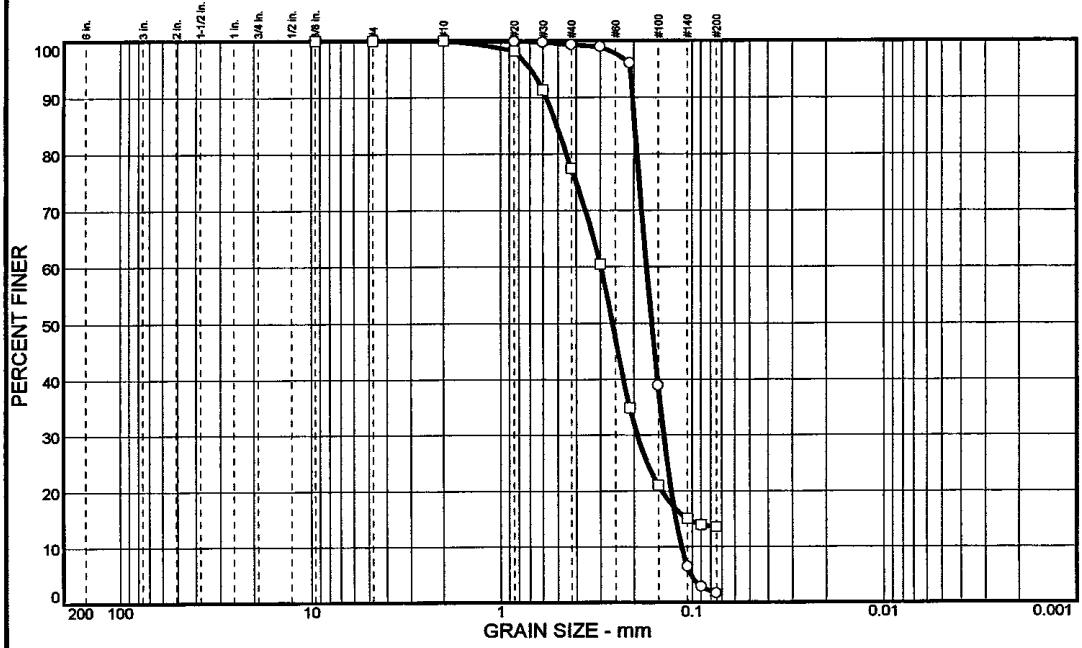
Client: U.S. Army Corps of Engineers
Project: Vibrocoring, New Jersey Coast, Cape May Inlet PED, Contract # DACW-61-9-D-0008, Task Order #8
Project No.: 3769.GI Date/Chk'd by: June 1999/WHS

PARTICLE SIZE DISTRIBUTION REPORT NJV-478



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○			98.3	1.7		SP			
□			86.4	13.6		SP-SM			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □
3/8	100.0	100.0
GRAIN SIZE		
D_{60}	0.172	0.298
D_{30}	0.140	0.192
D_{10}	0.113	
COEFFICIENTS		
C_c	1.01	
C_u	1.51	

SIEVE number size	PERCENT FINER ○	PERCENT FINER □
#4	100.0	100.0
#10	100.0	100.0
#20	99.9	98.2
#30	99.7	91.3
#40	99.3	77.5
#50	98.9	60.5
#70	96.0	34.9
#100	38.9	21.1
#140	6.5	15.1
#170	2.9	14.0
#200	1.7	13.6

SOIL DESCRIPTION

○ Light-gray fine SAND, trace silt, trace medium sand, trace shell fragments.

□ Gray fine SAND, some medium sand, little silt.

REMARKS:

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○ Source: NJV478 Sample No.: S-1 Elev./Depth: 0.4'-3.8'

□ Source: NJV478 Sample No.: S-4 Elev./Depth: 6.2'-9.9'

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Project No.: 3769.GI Date/Chk'd by: June 1999/WHS

PARTICLE SIZE DISTRIBUTION REPORT NJV-478

	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○			79.5	20.5		SM			
□		3.5	45.5	51.0		ML			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □
1		100.0
3/8	100.0	96.5
GRAIN SIZE		
D_{60}	0.276	0.117
D_{30}	0.123	
D_{10}		
COEFFICIENTS		
C_c		
C_u		

SIEVE number size	PERCENT FINER ○	PERCENT FINER □
#4	100.0	96.5
#10	99.9	96.4
#20	97.7	95.7
#30	92.9	94.6
#40	82.1	92.7
#50	64.6	89.1
#70	46.2	80.5
#100	35.4	68.9
#140	26.2	57.1
#170	23.0	53.4
#200	20.5	51.0

SOIL DESCRIPTION

○ Gray fine SAND, some silt, little medium sand.

□ Gray SILT and fine sand, trace medium sand, trace gravel.

REMARKS:

○

□

○ Source: NJV478 Sample No.: S-5 Elev./Depth: 9.9'-15.0'

□ Source: NJV478 Sample No.: S-6 Elev./Depth: 15.7'-16.5'

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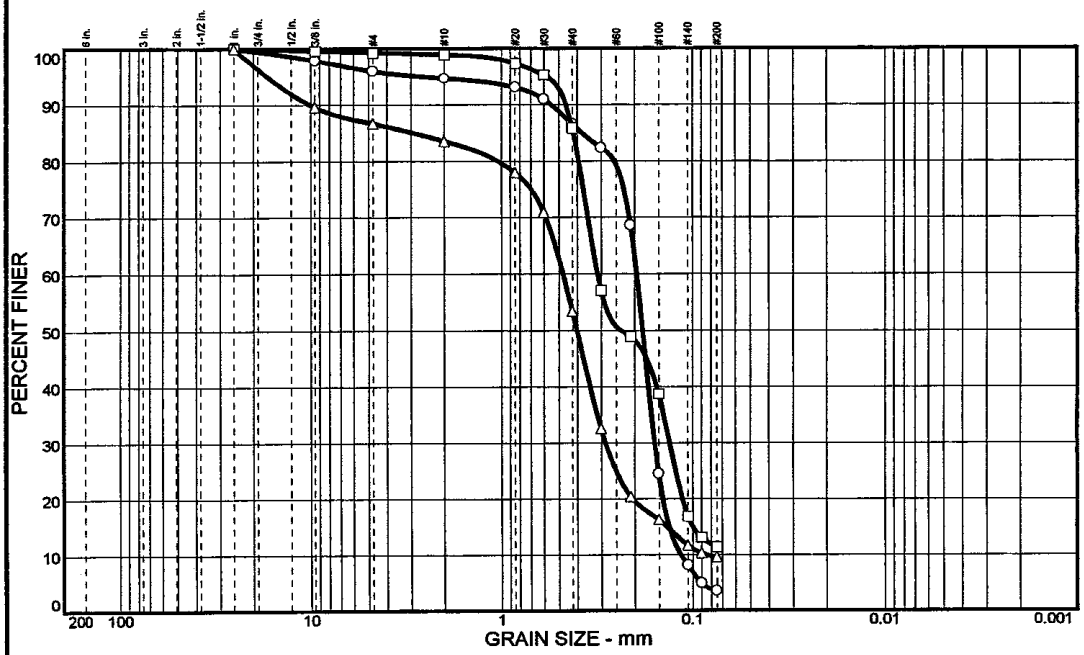
Client: U.S. Army Corps of Engineers

Project: Vibrocoring, Delaware Coast, Dewey/Rehoboth PED, Contract # DACW-61-98-D- 008, Task Order # 8

Project No.: 3769.GI Date/Chk'd by: June 1999/WHS

PARTICLE SIZE DISTRIBUTION REPORT NJV-479R1



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		4.0	92.4	3.6		SP			
□		0.7	87.9	11.4		SP-SM			
△		13.3	77.1	9.6		SP-SM			

SIEVE inches size	PERCENT FINER ○	□	△
1	100.0	100.0	100.0
3/8	97.9	99.6	89.6
	GRAIN SIZE		
D_{60}	0.195	0.313	0.475
D_{30}	0.157	0.131	0.284
D_{10}	0.115		0.0847
	COEFFICIENTS		
C_c	1.10		2.00
C_u	1.70		5.61

SIEVE number size	PERCENT FINER ○	□	△
#4	96.0	99.3	86.7
#10	94.7	98.9	83.6
#20	93.1	97.4	78.0
#30	91.0	95.3	70.9
#40	86.6	85.9	53.4
#50	82.4	57.1	32.6
#70	68.6	48.9	20.4
#100	24.5	38.7	16.3
#140	8.2	16.9	11.7
#170	4.9	13.1	10.3
#200	3.6	11.4	9.6

SOIL DESCRIPTION

○ Gray/tan fine SAND, trace medium sand, trace gravel, trace silt, trace coarse sand, trace shell fragments.

□ Gray/tan fine SAND, little medium sand, little silt, trace gravel, trace shell fragments.

△ Gray/tan fine SAND, some medium sand, little gravel, trace silt, trace coarse sand, trace shell fragments.

REMARKS:

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△

○ Source: NJV479R1	Sample No.: S-1	Elev./Depth: 0.0'-5.0'
□ Source: NJV479R1	Sample No.: S-2	Elev./Depth: 5.0'-9.9'
△ Source: NJV479R1	Sample No.: S-3	Elev./Depth: 9.9'-14.6'

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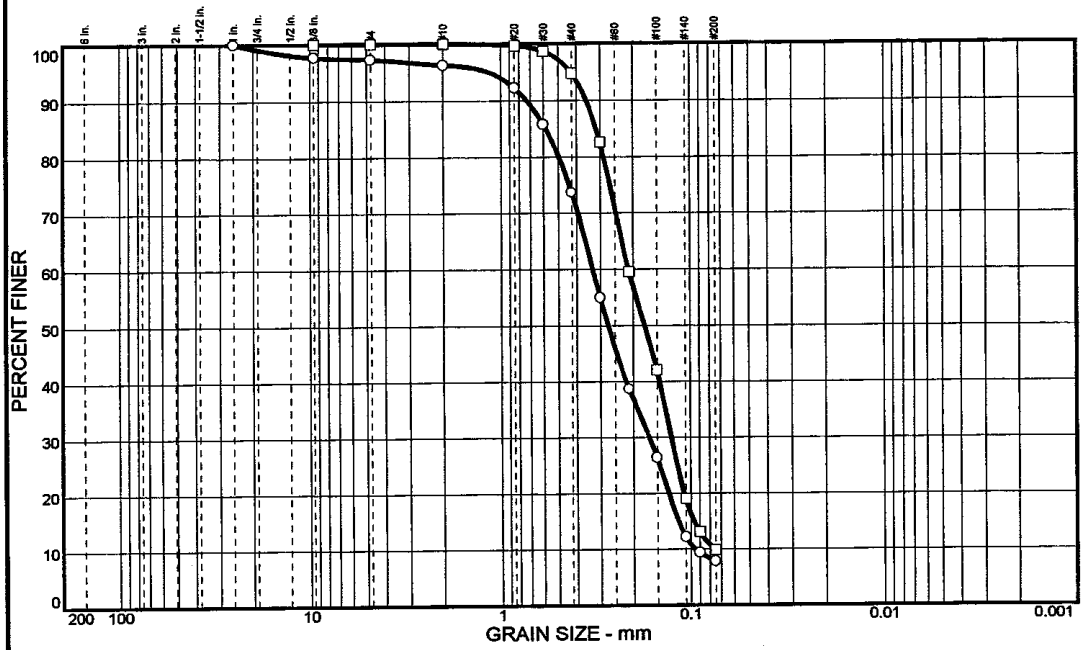
Project No.: 3769.GI Date/Chk'd by: June 1999/WHS

PARTICLE SIZE DISTRIBUTION REPORT NJV-479R3



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		2.7	89.5	7.8		SP-SM			
□			90.1	9.9		SP-SM			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □	
1	100.0		
3/8	97.7	100.0	
GRAIN SIZE			
D_{60}	0.329	0.211	
D_{30}	0.164	0.126	
D_{10}	0.0946	0.0755	
COEFFICIENTS			
C_c	0.87	0.99	
C_u	3.47	2.80	

SIEVE number size	PERCENT FINER ○	PERCENT FINER □	
#4	97.3	100.0	
#10	96.3	100.0	
#20	92.3	99.7	
#30	85.8	98.7	
#40	73.7	94.8	
#50	55.0	82.6	
#70	38.7	59.6	
#100	26.4	42.1	
#140	12.2	19.1	
#170	9.4	13.1	
#200	7.8	9.9	

SOIL DESCRIPTION

○ Tan fine SAND, some medium sand, trace silt, trace gravel, trace coarse sand.

□ Gray/tan fine SAND, trace silt, trace medium sand.

REMARKS:

○

□

○ Source: NJV479R3 Sample No.: S-1 Elev./Depth: 14.7'-15.6'

□ Source: NJV479R3 Sample No.: S-2 Elev./Depth: 15.6'-17.3'

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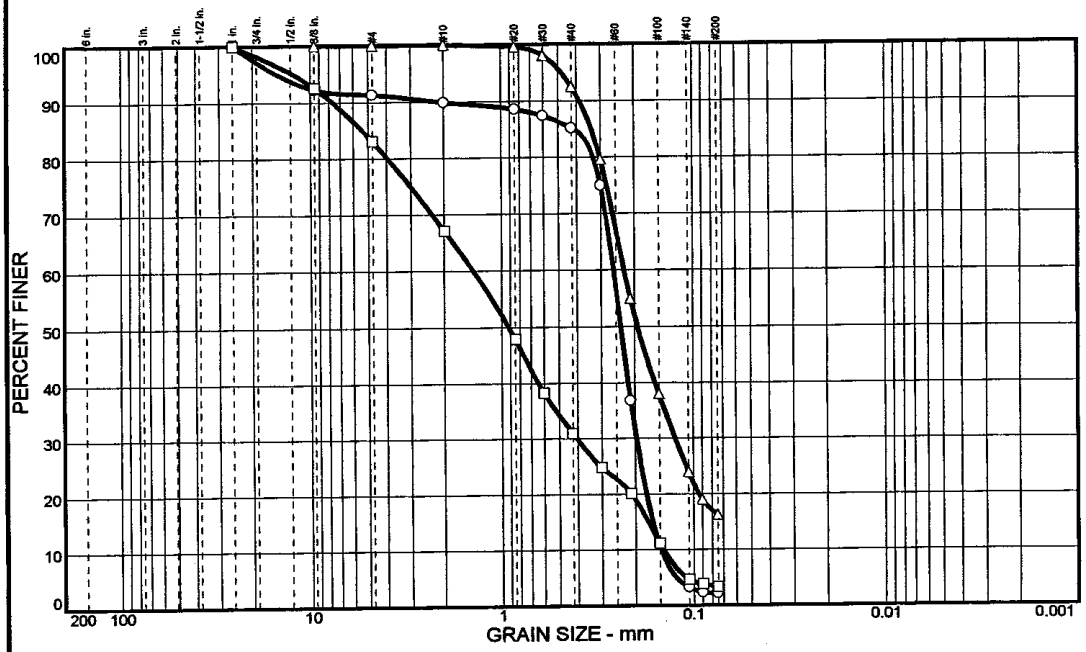
Project No.: 3769.GI Date/Chk'd by: June 1999/WHS

PARTICLE SIZE DISTRIBUTION REPORT NJV-480R1



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		8.7	89.1	2.2		SP			
□		16.9	79.7	3.4		SW			
△			83.7	16.3		SM			

SIEVE inches size	PERCENT FINER ○	□	△
1	100.0	100.0	
3/8	92.3	92.6	100.0
GRAIN SIZE			
D_{60}	0.257	1.40	0.226
D_{30}	0.196	0.404	0.124
D_{10}	0.147	0.143	
COEFFICIENTS			
C_c	1.02	0.81	
C_u	1.74	9.81	

SIEVE number size	PERCENT FINER ○	□	△
#4	91.3	83.1	100.0
#10	89.9	67.2	100.0
#20	88.6	47.9	99.6
#30	87.4	38.3	98.1
#40	85.2	31.0	92.5
#50	74.9	24.8	79.6
#70	36.8	20.1	55.0
#100	10.8	11.2	38.0
#140	3.3	4.7	24.0
#170	2.4	3.9	19.0
#200	2.2	3.4	16.3

SOIL DESCRIPTION

○ Tan fine SAND, trace gravel, trace medium sand, trace silt, trace coarse sand, trace shell fragments.

□ Gray/tan medium SAND, some fine sand, little gravel, little coarse sand, trace silt.

△ Tan fine SAND, little silt, trace medium sand.

REMARKS:

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○ Source: NJV480R1 Sample No.: S-1 Elev./Depth: 0.0'-2.0'

□ Source: NJV480R1 Sample No.: S-2 Elev./Depth: 2.3'-4.7'

△ Source: NJV480R1 Sample No.: S-3 Elev./Depth: 5.0'-5.8'

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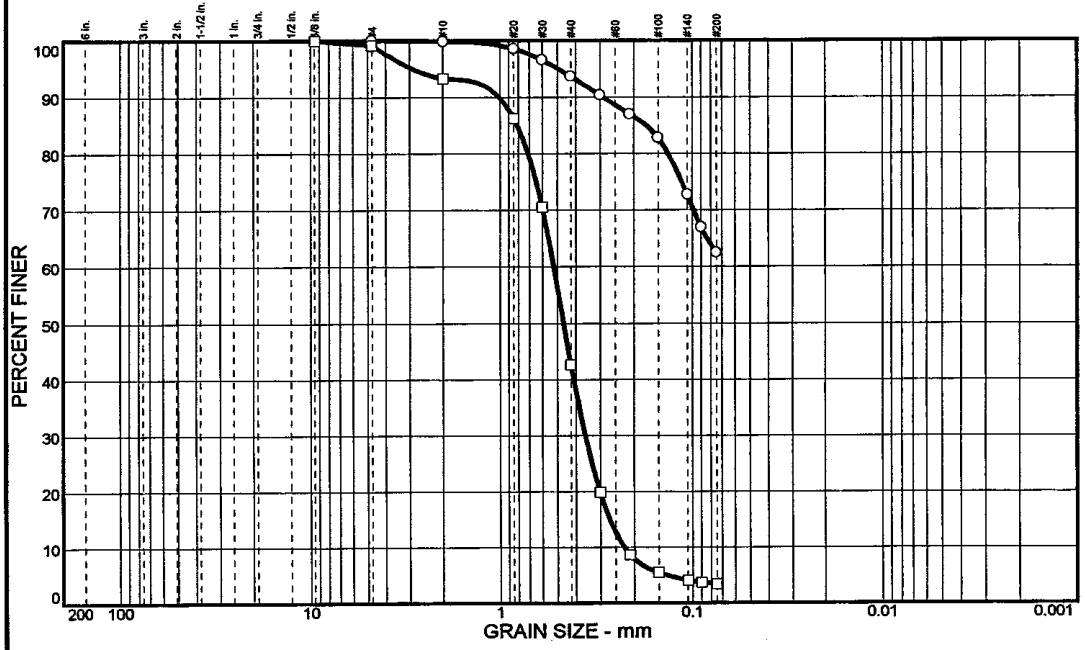
PARTICLE SIZE DISTRIBUTION REPORT NJV-480R1



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○			37.5	62.5		ML			
□		0.8	95.7	3.5		SP			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □
3/8	100.0	100.0
GRAIN SIZE		
D_{60}		0.522
D_{30}		0.358
D_{10}		0.225
COEFFICIENTS		
C_c		1.09
C_u		2.33

SIEVE number size	PERCENT FINER ○	PERCENT FINER □
#4	100.0	99.2
#10	99.9	93.4
#20	98.6	86.3
#30	96.6	70.6
#40	93.7	42.7
#50	90.4	19.9
#70	87.0	8.7
#100	82.8	5.5
#140	72.7	4.1
#170	67.0	3.7
#200	62.5	3.5

SOIL DESCRIPTION

○ Dark-brown SILT, some fine sand, trace medium sand.

□ Gray medium SAND and fine sand, trace coarse sand, trace silt, trace gravel.

REMARKS:

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○ Source: NJV480R1 Sample No.: S-4 Elev./Depth: 5.8'-8.3'

□ Source: NJV480R1 Sample No.: S-5 Elev./Depth: 8.3'-10.5'

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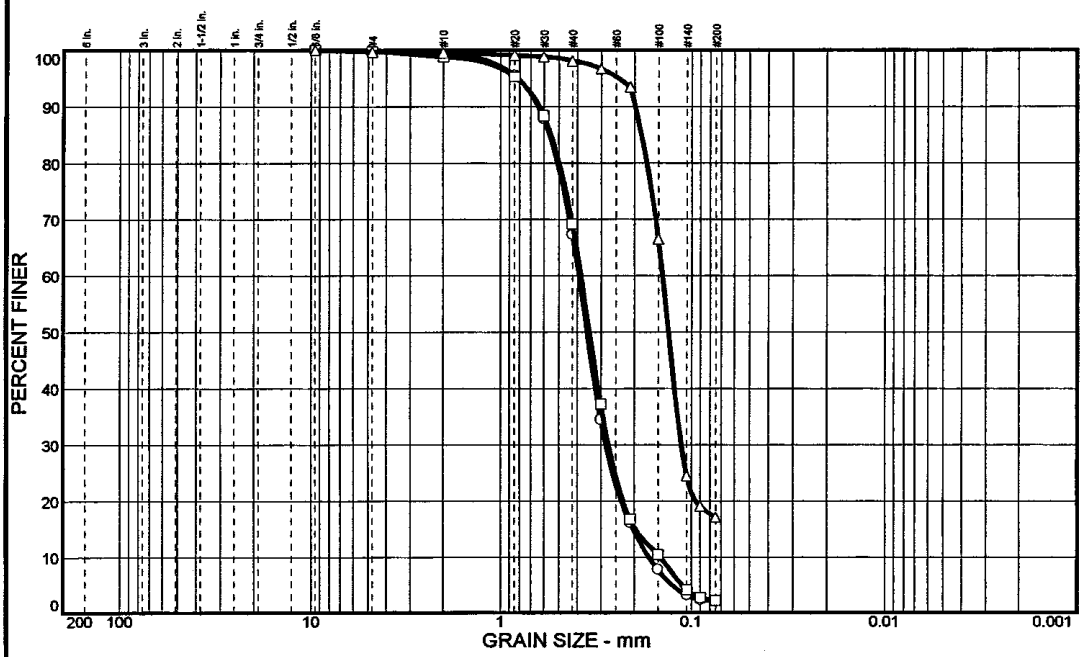
PARTICLE SIZE DISTRIBUTION REPORT NJV-480R3



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○			97.9	2.1		SP			
□		0.2	97.5	2.3		SP			
△		0.3	82.6	17.1		SM			

SIEVE inches size	PERCENT FINER ○	□	△
3/8	100.0	100.0	100.0
GRAIN SIZE			
D_{60}	0.393	0.383	0.142
D_{30}	0.282	0.273	0.113
D_{10}	0.167	0.146	
COEFFICIENTS			
C_c	1.21	1.34	
C_u	2.35	2.63	

SIEVE number size	PERCENT FINER ○	□	△
#4	100.0	99.8	99.7
#10	99.3	98.8	99.5
#20	95.5	95.3	99.1
#30	87.9	88.4	98.8
#40	67.3	69.2	98.1
#50	34.5	37.2	96.7
#70	16.2	16.8	93.5
#100	7.8	10.5	66.6
#140	3.2	4.2	24.5
#170	2.4	2.8	19.1
#200	2.1	2.3	17.1

SOIL DESCRIPTION

○ Tan fine SAND, some medium sand, trace silt, trace coarse sand.

□ Tan fine SAND, some medium sand, trace silt, trace coarse sand.

△ Gray fine SAND, little silt, trace medium sand.

REMARKS:

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△

○ Source: NJV480R3 Sample No.: S-2 Elev./Depth: 8.0'-11.8'

□ Source: NJV480R3 Sample No.: S-3 Elev./Depth: 11.8-12.7'

△ Source: NJV480R3 Sample No.: S-4 Elev./Depth: 12.7'-14.5'

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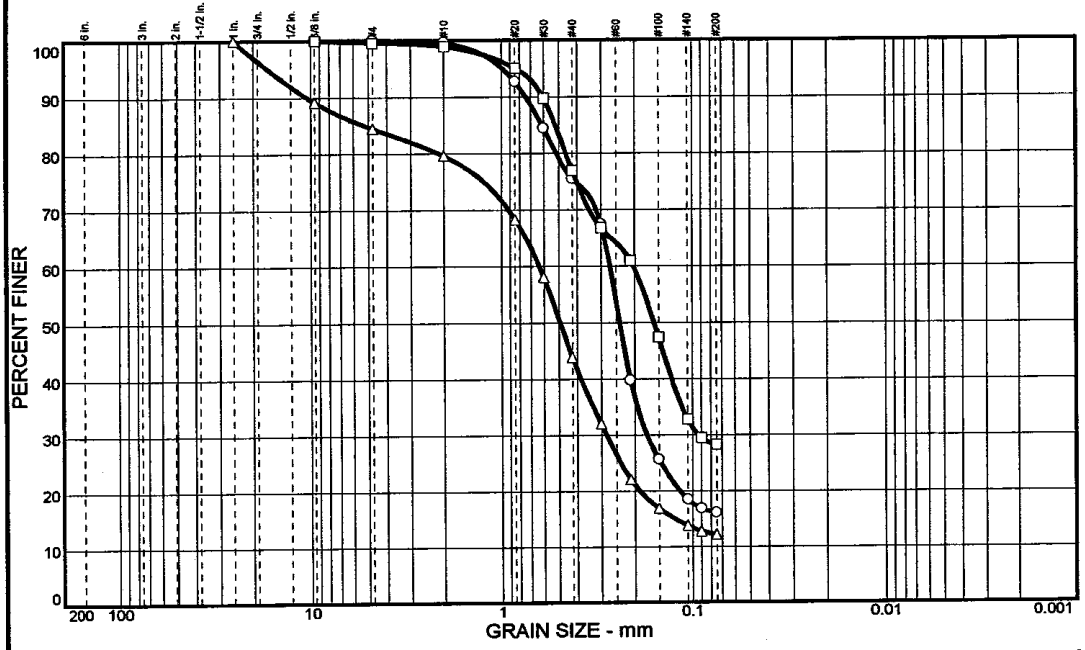
PARTICLE SIZE DISTRIBUTION REPORT NJV-481



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○			83.9	16.1		SM			
□		0.4	71.3	28.3		SM			
△		15.5	72.3	12.2		SP-SM			

SIEVE inches size	PERCENT FINER ○	□	△
1			100.0
3/8	100.0	100.0	89.2
GRAIN SIZE			
D_{60}	0.269	0.203	0.632
D_{30}	0.173	0.0933	0.281
D_{10}			
COEFFICIENTS			
C_c			
C_u			

SIEVE number size	PERCENT FINER ○	□	△
#4	100.0	99.6	84.5
#10	99.7	98.9	79.6
#20	92.7	95.1	68.4
#30	84.5	89.8	58.1
#40	75.5	77.0	43.9
#50	67.5	66.8	32.0
#70	39.8	61.0	22.1
#100	25.7	47.4	16.9
#140	18.5	32.8	13.8
#170	16.9	29.5	12.8
#200	16.1	28.3	12.2

SOIL DESCRIPTION

○ Tan/gray/green fine SAND, some medium sand, little silt.

□ Dark-gray fine SAND, some silt, some medium sand, trace coarse sand.

△ Dark-gray/brown medium SAND, some fine sand, little gravel, little silt, trace coarse sand.

REMARKS:

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○ Source: NJV481 Sample No.: S-1 Elev./Depth: 0.0'-1.8'

□ Source: NJV481 Sample No.: S-2 Elev./Depth: 2.3'-3.3'

△ Source: NJV481 Sample No.: S-5 Elev./Depth: 9.9'-11.2'

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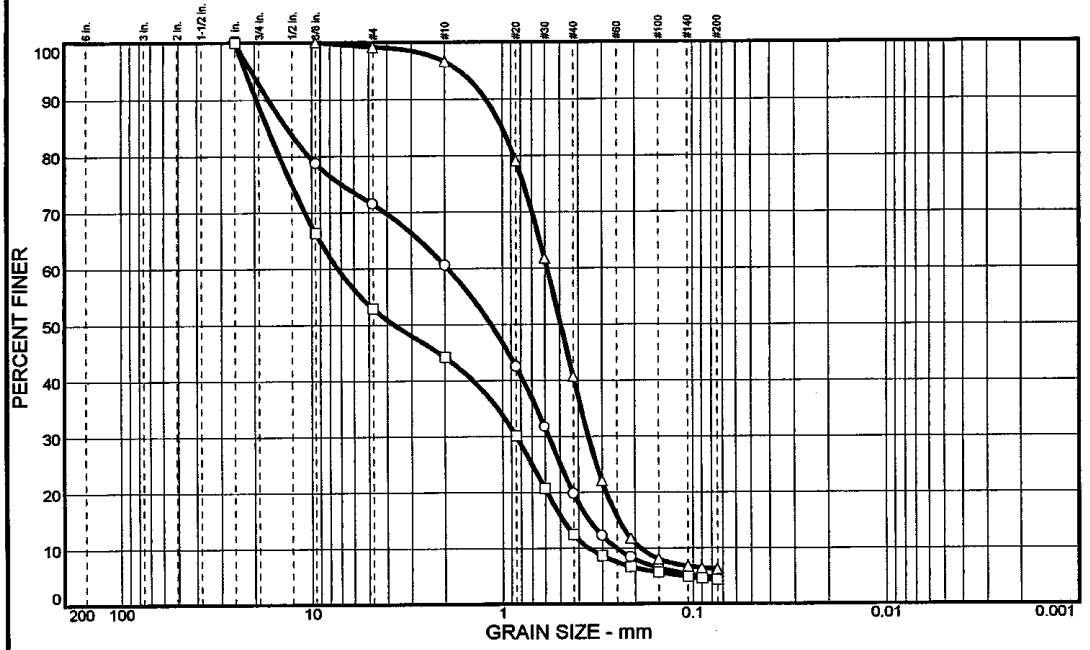
Project: Vibrocoring, Lower Cape May Meadows PED, Contract # DACW- 61-9-D-0008, Task Order #8

Project No.: 3769.GI Date/Chk'd by: June 1999/WHS

PARTICLE SIZE DISTRIBUTION REPORT NJV-481



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		28.5	66.8	4.7		SW			
□		47.1	48.6	4.3		SW			
△		0.8	92.9	6.3		SP-SM			

SIEVE inches size	PERCENT FINER ○	□	△
1	100.0	100.0	
3/8	78.8	66.4	100.0
	GRAIN SIZE		
D_{60}	1.93	7.26	0.582
D_{30}	0.572	0.847	0.353
D_{10}	0.251	0.352	0.186
	COEFFICIENTS		
C_c	0.68	0.28	1.15
C_u	7.69	20.64	3.13

SIEVE number size	PERCENT FINER ○	□	△
#4	71.5	52.9	99.2
#10	60.6	44.2	96.6
#20	42.5	30.1	79.1
#30	31.7	20.7	61.8
#40	19.8	12.5	40.7
#50	12.3	8.7	22.1
#70	8.4	6.7	11.8
#100	6.5	5.7	8.1
#140	5.4	4.9	6.8
#170	5.0	4.6	6.5
#200	4.7	4.3	6.3

SOIL DESCRIPTION

○ Dark-gray medium SAND, some gravel, little fine sand, little coarse sand, trace silt.

□ Dark-gray fine to coarse SAND and gravel, trace silt.

△ Orange medium SAND, some fine sand, trace silt, trace coarse sand, trace gravel.

REMARKS:

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○ Source: NJV481 Sample No.: S-6 Elev./Depth: 11.2'-14.9'

□ Source: NJV481 Sample No.: S-7 Elev./Depth: 14.9'-18.0'

△ Source: NJV481 Sample No.: S-8 Elev./Depth: 18.0'-20.0'

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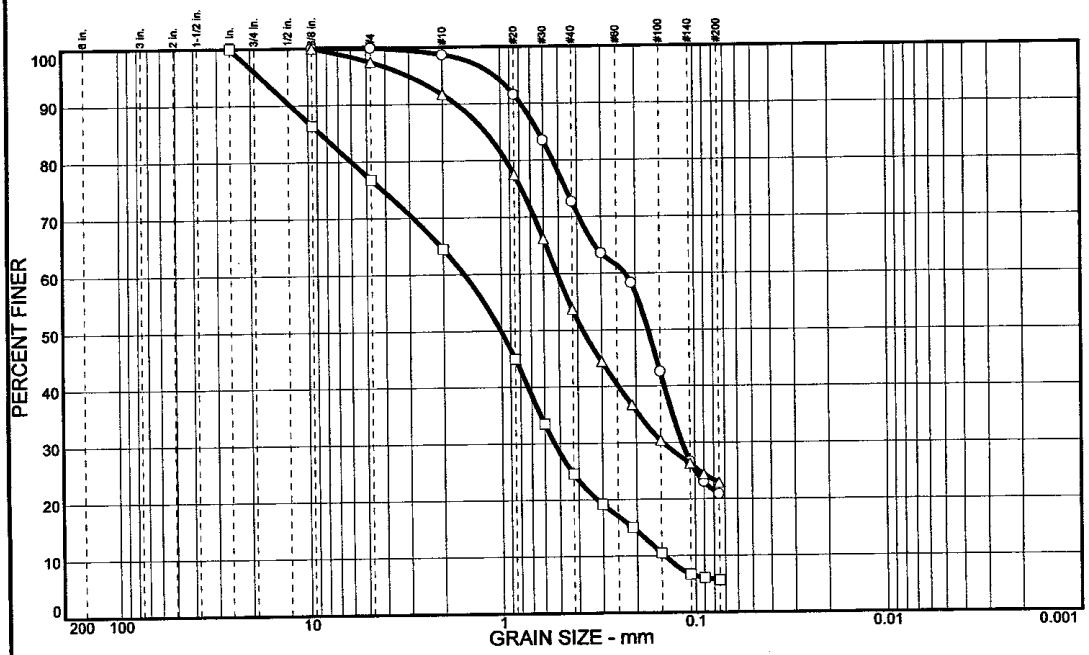
Project No.: 3769.GI Date/Chk'd by: June 1999/WHS

Particle Size Distribution Report NJV-482



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○			79.1	20.9		SM			
□		23.2	71.1	5.7		SW-SM			
△		2.5	74.6	22.9		SM			

SIEVE inches size	PERCENT FINER ○	□	△
1		100.0	
3/8	100.0	86.4	100.0
GRAIN SIZE			
D_{60}	0.226	1.55	0.508
D_{30}	0.116	0.533	0.146
D_{10}		0.145	
COEFFICIENTS			
C_c		1.26	
C_u		10.74	

SIEVE number size	PERCENT FINER ○	□	△
#4	100.0	76.8	97.5
#10	98.7	64.5	91.7
#20	91.6	45.0	77.5
#30	83.5	33.5	66.2
#40	72.7	24.6	53.7
#50	63.6	19.2	44.4
#70	58.3	15.1	36.7
#100	42.6	10.5	30.4
#140	26.7	6.7	26.3
#170	23.0	6.1	24.4
#200	20.9	5.7	22.9

SOIL DESCRIPTION

○ Gray fine SAND, some medium sand, some silt, trace coarse sand.

□ Gray medium SAND, little gravel, little fine sand, little coarse sand, trace silt.

△ Gray medium SAND, some fine sand, some silt, trace coarse sand, trace gravel.

REMARKS:

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○ Source: NJV482 — Sample No.: S-1 — Elev./Depth: 0.0'-2.2'

□ Source: NJV482 — Sample No.: S-2 — Elev./Depth: 2.2'-3.2'

△ Source: NJV482 — Sample No.: S-3 — Elev./Depth: 3.2'-4.8'

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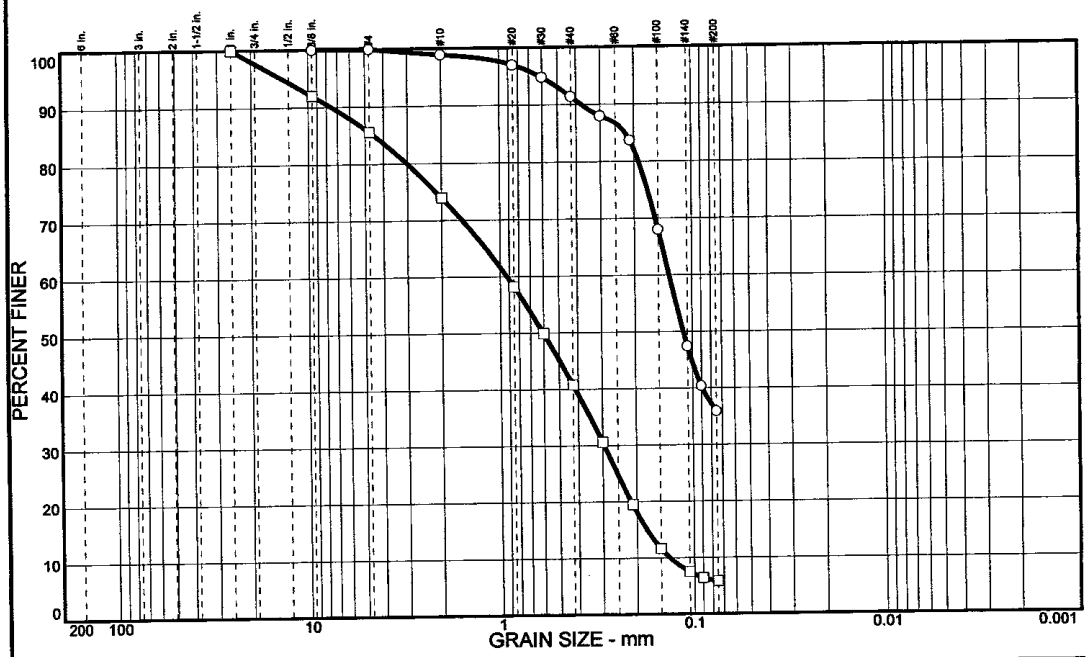
Client: U.S. Army Corps of Engineers

Project: Vibrocoring, New Jersey Coast, Lower Cape May Meadows PED, Contract # DACW-61-9-D-0008, Task Order #8.

Project No.: 3769.GI — Date/chk'd by: June 1999/WHS

Particle Size Distribution Report NJV-482



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○			64.1	35.9		SM			
□		14.4	79.8	5.8		SW-SM			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □
1		100.0
3/8	100.0	92.0
GRAIN SIZE		
D_{60}	0.132	0.923
D_{30}		0.294
D_{10}		0.134
COEFFICIENTS		
C_c		0.70
C_u		6.88

SIEVE number size	PERCENT FINER ○	PERCENT FINER □
#4	100.0	85.6
#10	98.9	74.0
#20	97.0	58.2
#30	94.8	49.9
#40	91.4	40.8
#50	88.0	30.6
#70	83.7	19.5
#100	68.0	11.7
#140	47.4	7.5
#170	40.4	6.4
#200	35.9	5.8

SOIL DESCRIPTION

○ Gray fine SAND and silt, trace medium sand, trace coarse sand.

□ Some gray fine SAND and medium SAND, little gravel, little coarse sand, trace silt.

REMARKS:

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○ Source: NJV482 Sample No.: S-4 Elev./Depth: 4.8'-8.8'

□ Source: NJV482 Sample No.: S-8 Elev./Depth: 18.3'-20.0'

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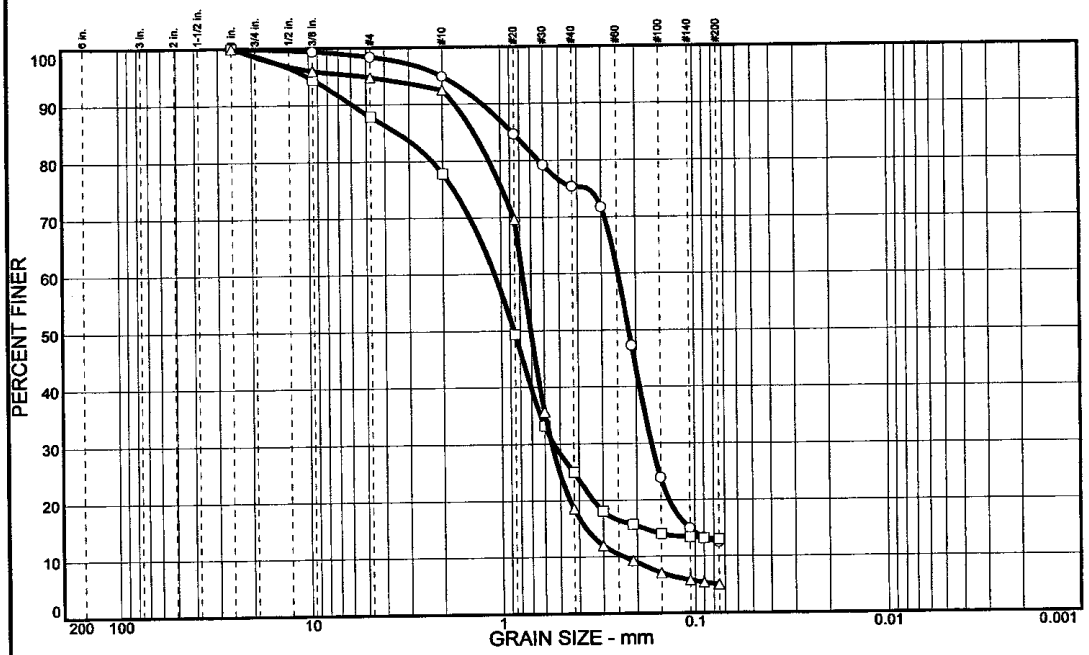
Project No.: 3769.GI Date/chk'd by: June 1999/WHS

Particle Size Distribution Report NJV-483



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		1.6	85.9	12.5		SP-SM			
□		12.1	74.9	13.0		SP-SM			
△		5.2	89.8	5.0		SP-SM			

SIEVE inches size	PERCENT FINER ○	□	△
1	100.0	100.0	100.0
3/8	99.4	94.5	96.0
	GRAIN SIZE		
D_{60}	0.246	1.08	0.776
D_{30}	0.167	0.539	0.552
D_{10}			0.234
	COEFFICIENTS		
C_c			1.68
C_u			3.31

SIEVE number size	PERCENT FINER ○	□	△
#4	98.4	87.9	94.8
#10	94.9	77.8	92.5
#20	84.7	49.4	69.7
#30	79.2	33.2	35.7
#40	75.4	25.0	18.6
#50	71.7	18.1	12.0
#70	47.3	15.7	9.3
#100	24.0	14.0	7.1
#140	15.0	13.4	5.8
#170	13.3	13.2	5.4
#200	12.5	13.0	5.0

SOIL DESCRIPTION

○ Gray fine SAND, little medium sand, little silt, trace coarse sand, trace gravel.

□ Gray medium SAND, little silt, little gravel, little fine sand, trace coarse sand.

△ Light brown medium SAND, little fine sand, trace gravel, trace silt, trace coarse sand.

REMARKS:

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○ Source: NJV483 Sample No.: S-1 Elev./Depth: 0.0'-0.6'
□ Source: NJV483 Sample No.: S-2 Elev./Depth: 0.6'-4.8'
△ Source: NJV483 Sample No.: S-3 Elev./Depth: 4.8'-9.5'

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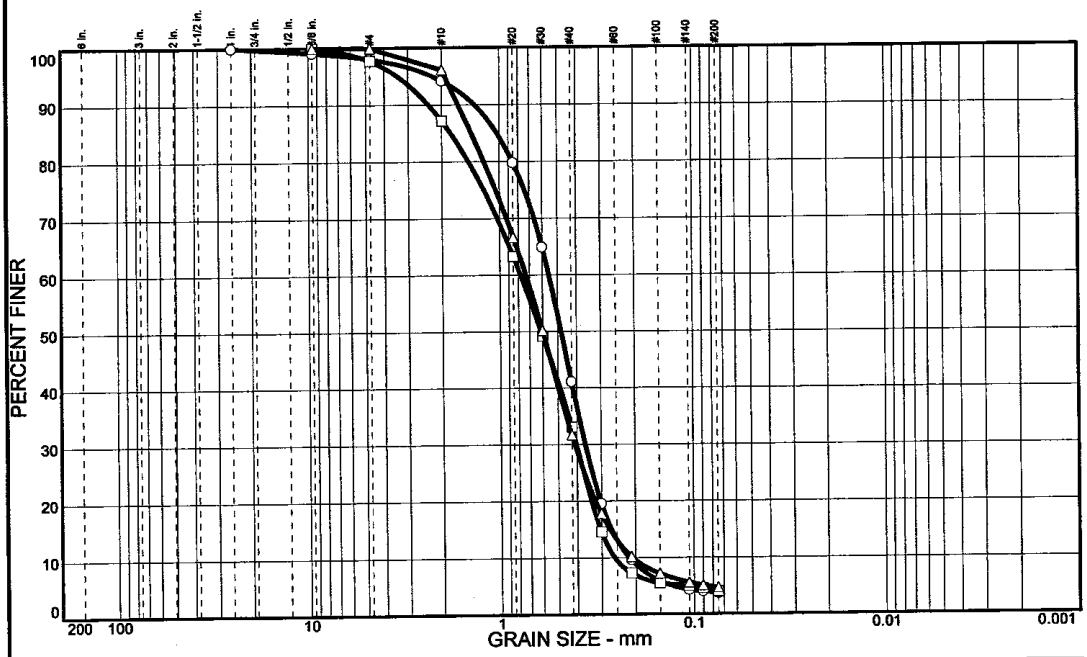
Particle Size Distribution Report NJV-483



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		2.0	94.3	3.7		SP			
□		2.3	93.7	4.0		SP			
△		0.1	95.2	4.7		SP			

SIEVE inches size	PERCENT FINER ○	□	△
1	100.0		
3/8	99.1	100.0	100.0
	GRAIN SIZE		
D_{60}	0.554	0.780	0.731
D_{30}	0.362	0.402	0.410
D_{10}	0.215	0.256	0.207
	COEFFICIENTS		
C_c	1.10	0.81	1.11
C_u	2.58	3.04	3.53

SIEVE number size	PERCENT FINER ○	□	△
#4	98.0	97.7	99.9
#10	94.2	87.2	96.1
#20	79.8	63.3	66.7
#30	64.9	49.2	50.2
#40	41.1	33.1	31.7
#50	19.6	14.6	17.8
#70	9.6	7.3	10.2
#100	5.9	5.5	7.2
#140	4.3	5.0	5.6
#170	4.0	4.6	5.1
#200	3.7	4.0	4.7

SOIL DESCRIPTION

○ Gray medium SAND and fine sand, trace coarse sand, trace silt, trace gravel.

□ Gray medium SAND, some fine sand, little coarse sand, trace silt, trace gravel.

△ Orange/brown medium SAND, some fine sand, trace silt, trace coarse sand.

REMARKS:

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○ Source: NJV483 Sample No.: S-5 Elev./Depth: 10.2'-14.7'

□ Source: NJV483 Sample No.: S-6 Elev./Depth: 14.7'-16.3'

△ Source: NJV483 Sample No.: S-7 Elev./Depth: 16.3'-19.2'

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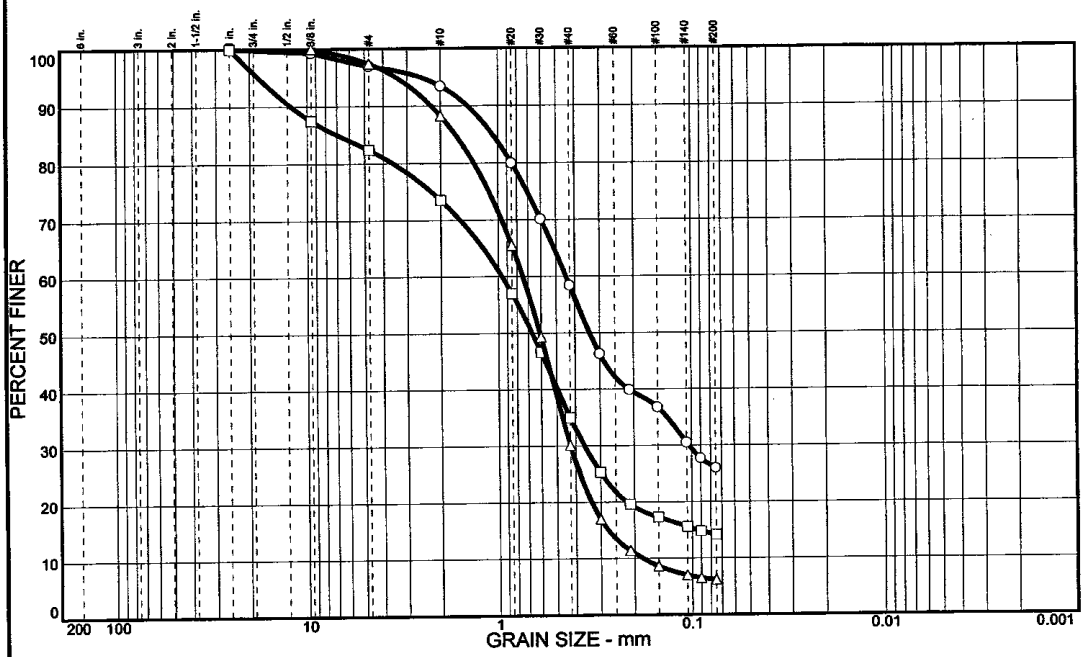
Particle Size Distribution Report NJV-484



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		3.0	71.0	26.0		SM			
□		17.6	68.2	14.2		SP-SM			
△		2.6	91.2	6.2		SP-SM			

SIEVE inches size	PERCENT FINER ○	□	△
1	100.0	100.0	
3/8	99.3	87.5	100.0
GRAIN SIZE			
D_{60}	0.444	0.957	0.746
D_{30}	0.103	0.361	0.424
D_{10}			0.181
COEFFICIENTS			
C_c			1.33
C_u			4.12

SIEVE number size	PERCENT FINER ○	□	△
#4	97.0	82.4	97.4
#10	93.5	73.5	88.3
#20	80.0	57.0	65.5
#30	70.1	46.6	49.3
#40	58.4	35.0	30.1
#50	46.3	25.3	17.0
#70	39.9	19.6	11.4
#100	36.8	17.3	8.6
#140	30.5	15.6	7.0
#170	27.7	14.8	6.5
#200	26.0	14.2	6.2

SOIL DESCRIPTION

○ Gray medium SAND some fine sand, some silt, trace coarse sand, trace gravel.

□ Dark-gray medium SAND, some fine sand, little gravel, little silt, trace coarse sand.

△ Tan medium SAND, some fine sand, trace coarse sand, trace silt, trace gravel.

REMARKS:

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○ Source: NJV484 Sample No.: S-1 Elev./Depth: 0.0'-2.0'
□ Source: NJV484 Sample No.: S-3 Elev./Depth: 3.0'-5.9'
△ Source: NJV484 Sample No.: S-4 Elev./Depth: 5.9'-10.0'

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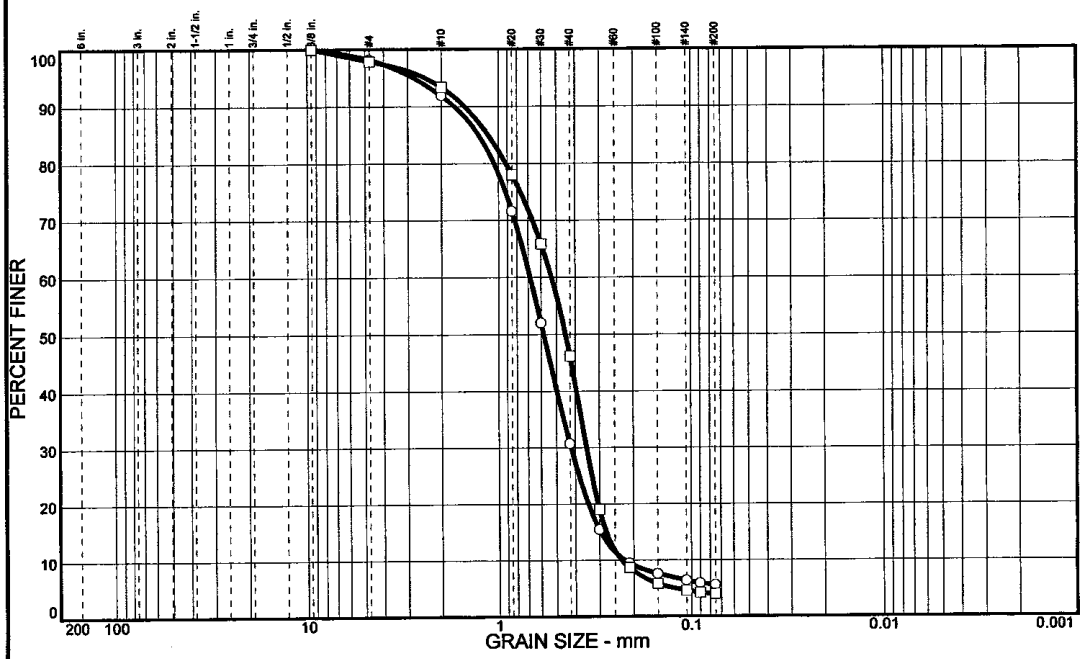
Particle Size Distribution Report NJV-484



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		1.8	92.6	5.6		SP-SM			
□		2.1	93.9	4.0		SP			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □	
3/8	100.0	100.0	
	GRAIN SIZE		
D_{60}	0.684	0.529	
D_{30}	0.420	0.349	
D_{10}	0.222	0.230	
	COEFFICIENTS		
C_c	1.16	1.00	
C_u	3.08	2.30	

SIEVE number size	PERCENT FINER ○	PERCENT FINER □	
#4	98.2	97.9	
#10	91.9	93.4	
#20	71.6	78.0	
#30	52.0	65.9	
#40	30.7	46.2	
#50	15.5	19.1	
#70	9.5	8.7	
#100	7.6	5.8	
#140	6.4	4.6	
#170	5.9	4.2	
#200	5.6	4.0	

SOIL DESCRIPTION

○ Tan medium SAND, some fine sand, trace coarse sand, trace silt, trace gravel.

□ Tan medium SAND and fine sand, trace coarse sand, trace silt, trace gravel.

REMARKS:

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○ Source: NJV484 Sample No.: S-5 Elev./Depth: 10.0'-15.0'

□ Source: NJV484 Sample No.: S-6 Elev./Depth: 15.0'-20.0'

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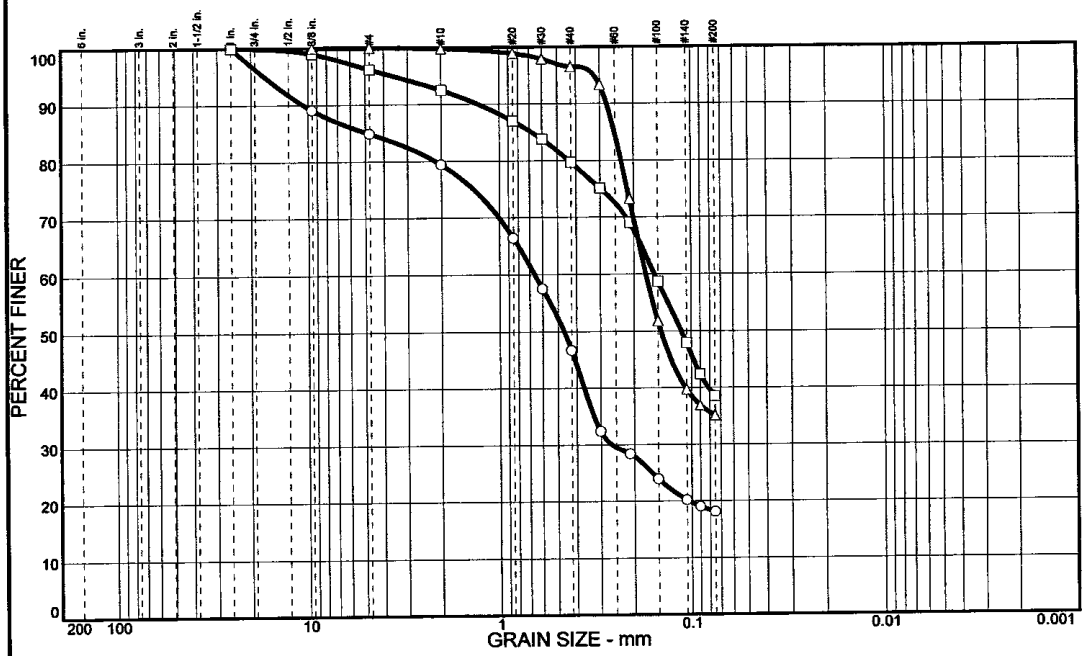
Project No.: 3769.GI Date/chk'd by: June 1999/WHS

Particle Size Distribution Report NJV-485



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		15.1	66.8	18.1		SM			
□		3.8	57.7	38.5		SM			
△			64.9	35.1		SM			

SIEVE inches size	PERCENT FINER ○	□	△
1	100.0	100.0	
3/8	89.1	99.0	100.0
GRAIN SIZE			
D_{60}	0.659	0.156	0.173
D_{30}	0.263		
D_{10}			
COEFFICIENTS			
C_c			
C_u			

SIEVE number size	PERCENT FINER ○	□	△
#4	84.9	96.2	100.0
#10	79.4	92.5	99.8
#20	66.4	87.0	98.9
#30	57.5	83.8	97.9
#40	46.7	79.7	96.5
#50	32.4	75.1	93.3
#70	28.4	69.0	73.2
#100	23.9	58.7	51.8
#140	20.2	47.9	39.7
#170	19.0	42.4	36.9
#200	18.1	38.5	35.1

SOIL DESCRIPTION

○ Gray medium SAND, some fine sand, little silt, little gravel, trace coarse sand.

□ Gray fine SAND and silt, little medium sand, trace gravel, trace coarse sand.

△ Gray/tan fine SAND, some silt, trace medium sand.

REMARKS:

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○ Source: NJV485 Sample No.: S-1 Elev./Depth: 0.0'-2.9'
□ Source: NJV485 Sample No.: S-2 Elev./Depth: 2.9'-4.6'
△ Source: NJV485 Sample No.: S-4 Elev./Depth: 5.5'-6.8'

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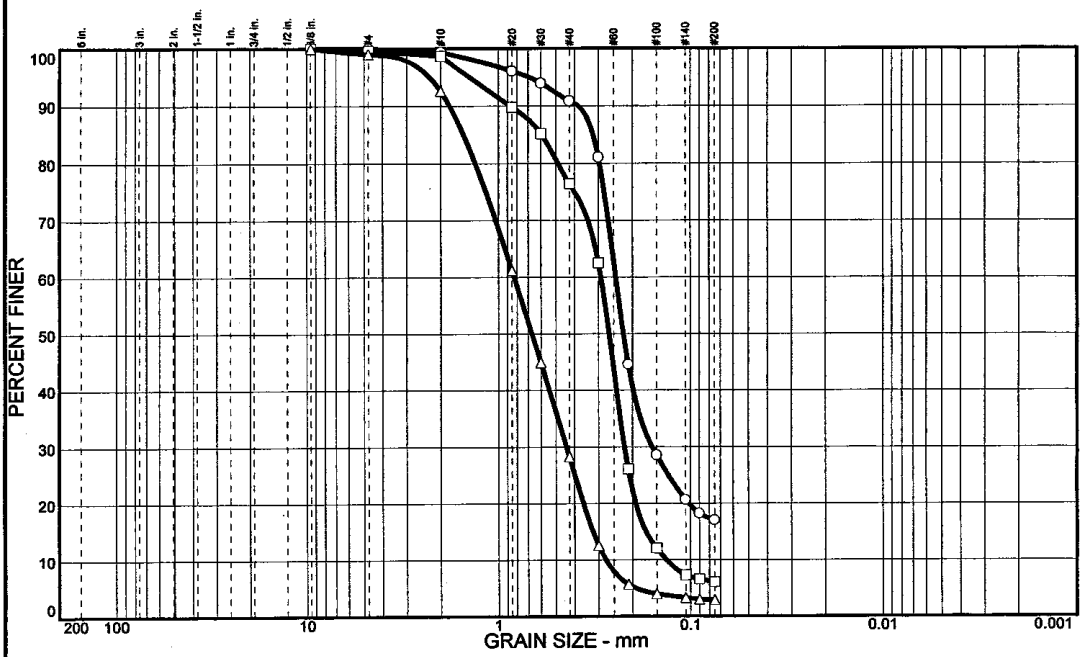

	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○			82.9	17.1		SM			
□		0.4	93.5	6.1		SP-SM			
△		1.0	96.1	2.9		SP			

SIEVE inches size	PERCENT FINER ○	□	△
3/8	100.0	100.0	100.0
	GRAIN SIZE		
D_{60}	0.244	0.291	0.828
D_{30}	0.158	0.219	0.440
D_{10}		0.133	0.275
	COEFFICIENTS		
C_c		1.24	0.85
C_u		2.19	3.02

SIEVE number size	PERCENT FINER ○	□	△
#4	100.0	99.6	99.0
#10	99.4	98.7	92.6
#20	96.1	89.8	61.2
#30	94.0	85.2	44.9
#40	90.9	76.5	28.3
#50	81.1	62.5	12.6
#70	44.6	26.1	5.7
#100	28.6	12.1	4.0
#140	20.7	7.3	3.3
#170	18.3	6.6	3.0
#200	17.1	6.1	2.9

SOIL DESCRIPTION

○ Gray/tan fine SAND, little silt, trace medium sand, trace coarse sand.

□ Gray/tan fine SAND, some medium sand, trace silt, trace coarse sand.

△ Tan medium SAND, some fine sand, trace coarse sand, trace silt, trace gravel.

REMARKS:

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○ Source: NJV485 Sample No.: S-5 Elev./Depth: 7.1'-10.0'

□ Source: NJV485 Sample No.: S-6 Elev./Depth: 10.0'-10.7'

△ Source: NJV485 Sample No.: S-7 Elev./Depth: 11.1'-15.0'

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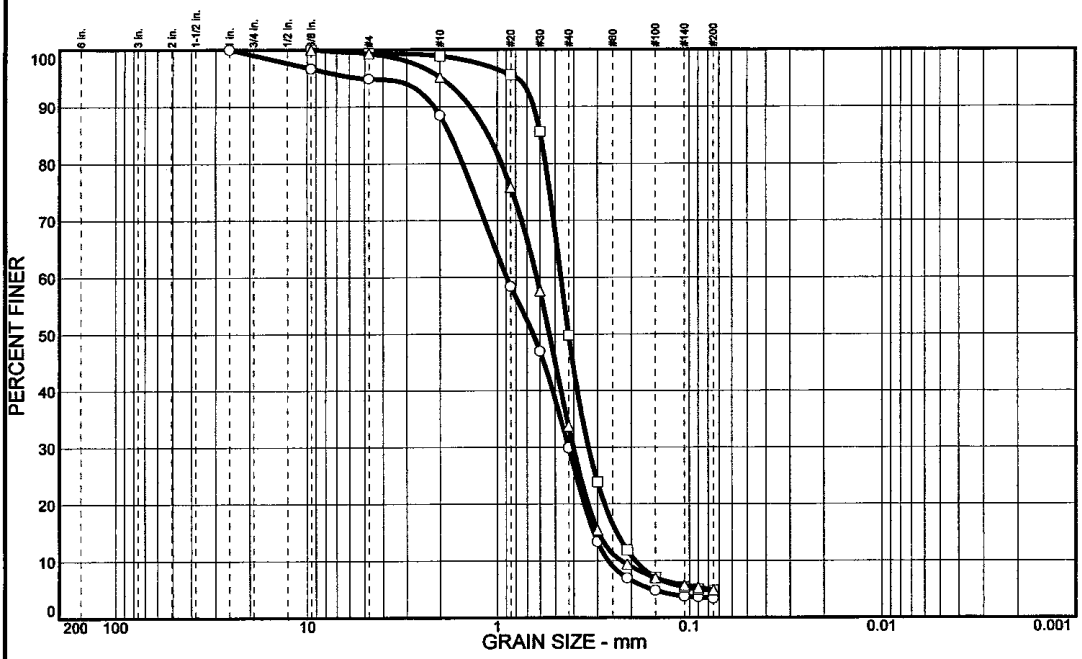
Particle Size Distribution Report NJV-485



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		5.1	91.5	3.4		SP			
□		0.6	94.6	4.8		SP			
△		0.7	94.4	4.9		SP			

SIEVE inches size	PERCENT FINER ○	□	△
1	100.0		
3/8	96.7	100.0	100.0
	GRAIN SIZE		
D_{60}	0.892	0.466	0.623
D_{30}	0.426	0.334	0.402
D_{10}	0.264	0.190	0.225
	COEFFICIENTS		
C_c	0.77	1.26	1.15
C_u	3.38	2.46	2.77

SIEVE number size	PERCENT FINER ○	□	△
#4	94.9	99.4	99.3
#10	88.5	98.9	95.2
#20	58.4	95.6	75.8
#30	47.0	85.6	57.6
#40	29.9	49.8	33.7
#50	13.4	23.9	15.4
#70	7.0	11.9	9.4
#100	4.8	7.1	7.0
#140	3.8	5.4	5.7
#170	3.6	5.0	5.3
#200	3.4	4.8	4.9

SOIL DESCRIPTION

○ Tan medium SAND, some fine sand, trace coarse sand, trace gravel, trace silt.

□ Tan medium SAND and fine sand, trace silt, trace gravel, trace coarse sand.

△ Tan medium SAND, some fine sand, trace silt, trace coarse sand, trace gravel.

REMARKS:

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○ Source: NJV485	Sample No.: S-8	Elev./Depth: 15.0'-16.5'
□ Source: NJV485	Sample No.: S-9	Elev./Depth: 16.5'-18.4'
△ Source: NJV485	Sample No.: S-10	Elev./Depth: 18.4'-20.0'

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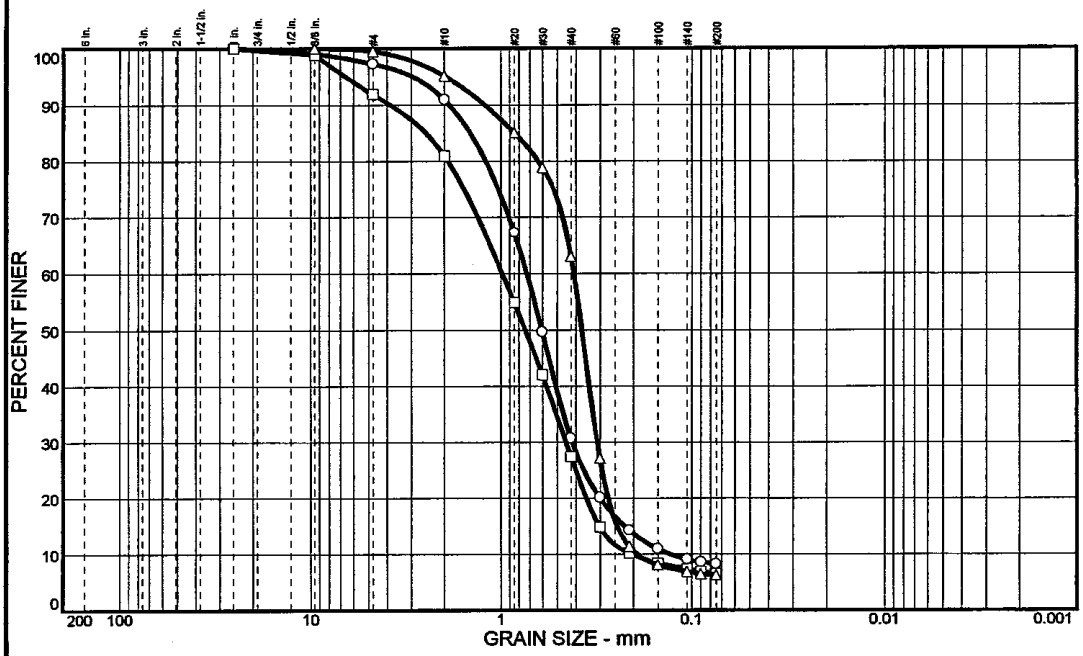
PARTICLE SIZE DISTRIBUTION REPORT NJV-486



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		2.7	89.0	8.3		SP-SM			
□		8.1	85.3	6.6		SP-SM			
△		0.5	93.2	6.3		SP-SM			

SIEVE inches size	PERCENT FINER ○	□	△
1	100.0	100.0	
3/8	99.1	98.9	100.0
	GRAIN SIZE		
D_{60}	0.727	0.983	0.411
D_{30}	0.418	0.450	0.310
D_{10}	0.129	0.204	0.191
	COEFFICIENTS		
C_c	1.87	1.01	1.22
C_u	5.65	4.83	2.15

SIEVE number size	PERCENT FINER ○	□	△
#4	97.3	91.9	99.5
#10	91.0	81.0	95.2
#20	67.3	54.9	85.1
#30	49.7	42.1	78.9
#40	30.7	27.5	63.1
#50	20.1	14.9	27.1
#70	14.3	10.2	11.4
#100	11.0	8.4	8.1
#140	9.1	7.4	6.9
#170	8.6	6.9	6.5
#200	8.3	6.6	6.3

SOIL DESCRIPTION

○ Gray/tan medium SAND, some fine sand, trace silt, trace coarse sand, trace gravel.

□ Gray/tan medium SAND, some fine sand, little coarse sand, trace gravel, trace silt.

△ Tan/gray fine SAND, some medium sand, trace silt, trace coarse sand, trace gravel.

REMARKS:

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○ Source: NJV486 Sample No.: S-1 Elev./Depth: 0.0'-5.0'
□ Source: NJV486 Sample No.: S-2 Elev./Depth: 5.0'-8.9'
△ Source: NJV486 Sample No.: S-3 Elev./Depth: 8.9'-10.0'

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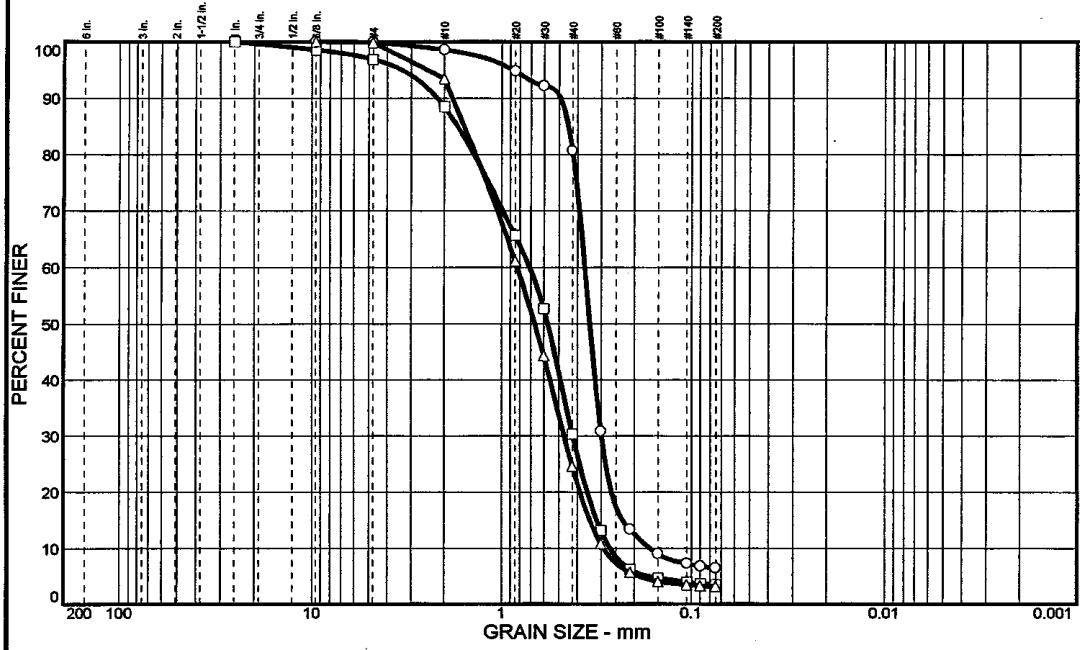
Client: U.S. Army Corps of Engineers
Project: Vibrocoring, Lower Cape May Meadows PED, Contract # DACW- 61-9-D-0008, Task Order #8
Project No.: 3769.GI Date/Chk'd by: June 1999/WHS

PARTICLE SIZE DISTRIBUTION REPORT NJV-486



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		0.1	93.4	6.5		SP-SM			
□		3.1	93.4	3.5		SP			
△		0.1	96.7	3.2		SP			

SIEVE inches size	PERCENT FINER ○	□	△
1		100.0	
3/8	100.0	98.6	100.0
	GRAIN SIZE		
D_{60}	0.365	0.710	0.827
D_{30}	0.298	0.423	0.469
D_{10}	0.165	0.268	0.290
	COEFFICIENTS		
C_c	1.47	0.94	0.92
C_u	2.21	2.66	2.85

SIEVE number size	PERCENT FINER ○	□	△
#4	99.9	96.9	99.9
#10	98.6	88.5	93.5
#20	94.8	65.6	61.2
#30	92.2	52.7	44.3
#40	80.7	30.3	24.6
#50	30.8	13.2	10.8
#70	13.4	6.3	5.7
#100	9.0	4.7	4.1
#140	7.3	4.0	3.5
#170	6.8	3.7	3.3
#200	6.5	3.5	3.2

SOIL DESCRIPTION

○ Tan-gray fine SAND, little medium sand, trace silt, trace coarse sand.

□ Tan/gray medium SAND, some fine sand, trace coarse sand, trace silt, trace gravel.

△ Tan/gray medium SAND, some fine sand, trace coarse sand, trace silt.

REMARKS:

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○ Source: NJV486 Sample No.: S-4 Elev./Depth: 10.0'-12.0'
□ Source: NJV486 Sample No.: S-5 Elev./Depth: 12.0'-15.0'
△ Source: NJV486 Sample No.: S-6 Elev./Depth: 15.0'-18.5'

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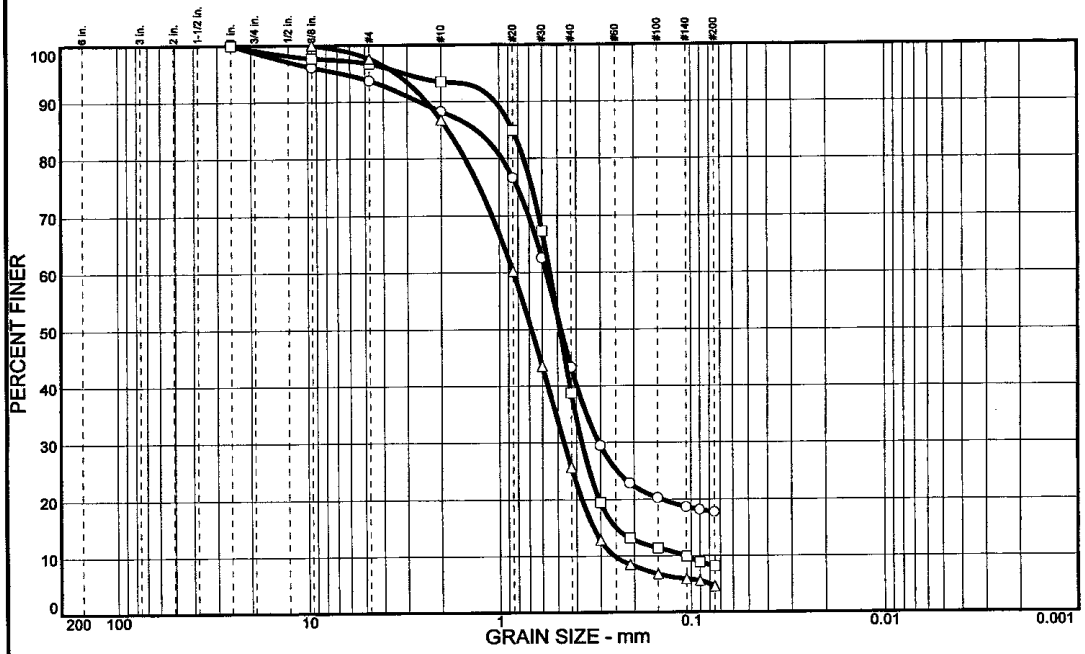
Project No.: 3769.GI Date/Chk'd by: June 1999/WHS

Particle Size Distribution Report NJV-487



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		6.3	75.9	17.8					
□		3.3	88.5	8.2		SP-SM			
△		2.4	93.0	4.6		SP			

SIEVE inches size	PERCENT FINER ○	□	△
1	100.0	100.0	
3/8	96.1	97.7	100.0
	GRAIN SIZE		
D_{60}	0.572	0.547	0.846
D_{30}	0.305	0.374	0.464
D_{10}		0.108	0.254
	COEFFICIENTS		
C_c		2.37	1.00
C_u		5.07	3.33

SIEVE number size	PERCENT FINER ○	□	△
#4	93.7	96.7	97.6
#10	88.3	93.5	86.8
#20	76.6	84.9	60.2
#30	62.6	67.3	43.5
#40	43.3	38.8	25.7
#50	29.5	19.5	12.8
#70	22.9	13.2	8.5
#100	20.3	11.4	6.8
#140	18.7	9.9	5.9
#170	18.2	8.9	5.6
#200	17.8	8.2	4.6

SOIL DESCRIPTION

○ Dark-gray medium SAND, some fine sand, little silt, trace gravel, trace coarse sand.

□ Gray medium SAND, some fine sand, trace silt, trace gravel, trace coarse sand.

△ Tan medium SAND, some fine sand, little coarse sand, trace silt, trace gravel.

REMARKS:

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○ Source: NJV487 Sample No.: S-2 Elev./Depth: 0.9'-3.8'

□ Source: NJV487 Sample No.: S-3 Elev./Depth: 3.8'-5.0'

△ Source: NJV487 Sample No.: S-4 Elev./Depth: 5.0'-7.6'

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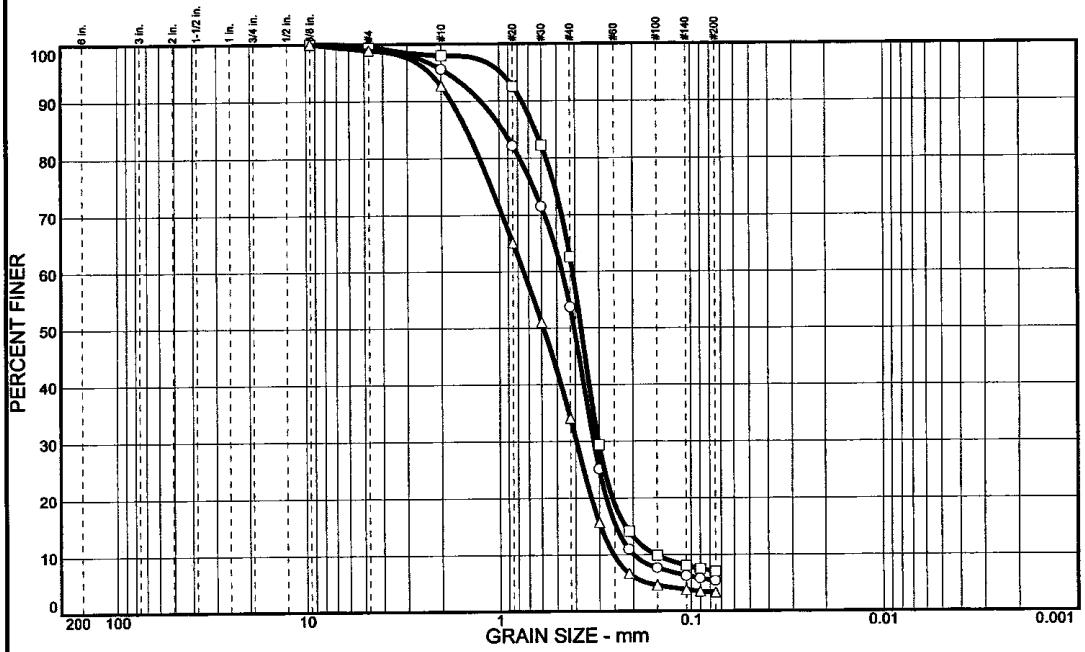
Project No.: 3769.GI Date/chk'd by: June 1999/WHS

Particle Size Distribution Report NJV-487



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		0.4	94.2	5.4		SP-SM			
□		0.6	92.3	7.1		SP-SM			
△		1.1	95.6	3.3		SP			

SIEVE inches size	PERCENT FINER ○	□	△
3/8	100.0	100.0	100.0
	GRAIN SIZE		
D_{60}	0.468	0.413	0.746
D_{30}	0.320	0.302	0.395
D_{10}	0.198	0.152	0.252
	COEFFICIENTS		
C_c	1.11	1.46	0.83
C_u	2.37	2.71	2.96

SIEVE number size	PERCENT FINER ○	□	△
#4	99.6	99.4	98.9
#10	95.6	98.0	92.7
#20	82.2	92.6	65.1
#30	71.5	82.3	51.0
#40	53.7	62.6	34.1
#50	25.2	29.4	15.7
#70	11.0	14.2	6.7
#100	7.7	9.9	4.6
#140	6.3	8.1	3.8
#170	5.8	7.5	3.5
#200	5.4	7.1	3.3

SOIL DESCRIPTION

○ Tan-gray fine SAND and medium sand, trace silt, trace coarse sand.

□ Tan-gray fine SAND and medium sand, trace silt, trace coarse sand, trace gravel.

△ Tan medium SAND, some fine sand, trace coarse sand, trace silt, trace gravel.

REMARKS:

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○ Source: NJV487 Sample No.: S-5 Elev./Depth: 7.6'-10.0'

□ Source: NJV487 Sample No.: S-6 Elev./Depth: 10.0'-12.9'

△ Source: NJV487 Sample No.: S-7 Elev./Depth: 12.9'-15.0'

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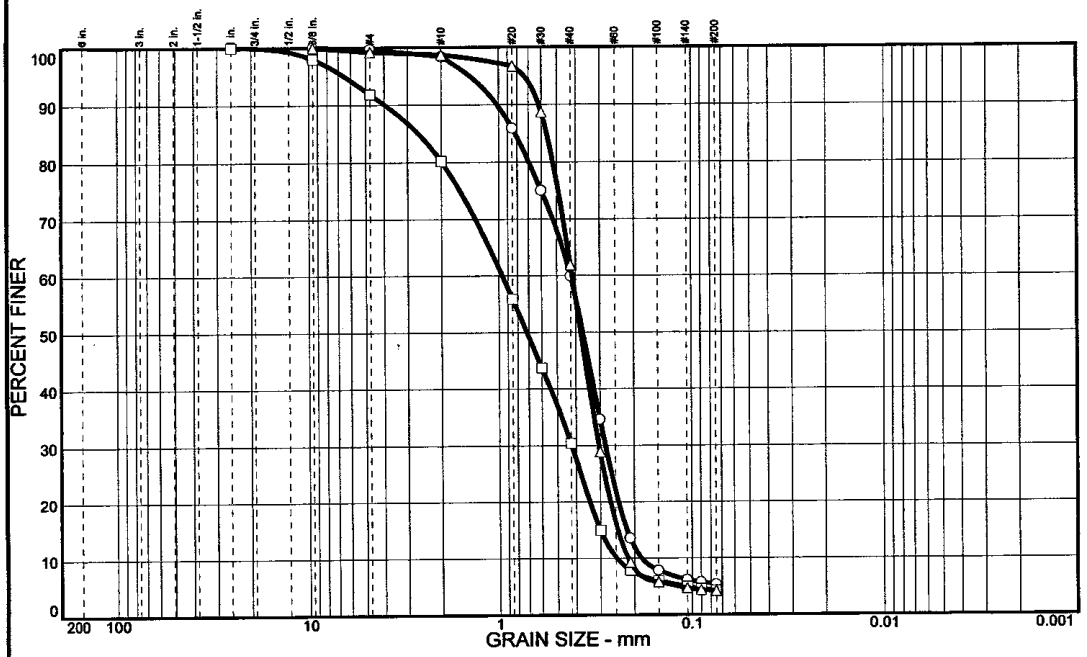
Particle Size Distribution Report NJV-487



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		0.3	94.3	5.4		SP-SM			
□		8.1	87.6	4.3		SP			
△		0.8	95.0	4.2		SP			

SIEVE inches size	PERCENT FINER ○	□	△
1		100.0	
3/8	100.0	98.0	100.0
	GRAIN SIZE		
D_{60}	0.426	0.960	0.417
D_{30}	0.282	0.421	0.304
D_{10}	0.183	0.246	0.215
	COEFFICIENTS		
C_c	1.02	0.75	1.03
C_u	2.33	3.90	1.94

SIEVE number size	PERCENT FINER ○	□	△
#4	99.7	91.9	99.2
#10	98.4	80.2	98.7
#20	85.9	55.9	96.7
#30	75.0	43.7	88.7
#40	59.9	30.4	61.9
#50	34.6	15.0	28.9
#70	13.6	7.9	9.3
#100	7.9	6.0	5.8
#140	6.2	5.0	4.7
#170	5.8	4.6	4.4
#200	5.4	4.3	4.2

SOIL DESCRIPTION

○ Tan fine SAND and medium sand, trace silt, trace coarse sand.

□ Tan medium SAND, some fine sand, little coarse sand, trace gravel, trace silt.

△ Tan fine SAND and medium sand, trace silt, trace gravel, trace coarse sand.

REMARKS:

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○ Source: NJV487 Sample No.: S-8 Elev./Depth: 15.0'-16.4'

□ Source: NJV487 Sample No.: S-9 Elev./Depth: 16.4'-18.0'

△ Source: NJV487 Sample No.: S-10 Elev./Depth: 18.0'-18.5'

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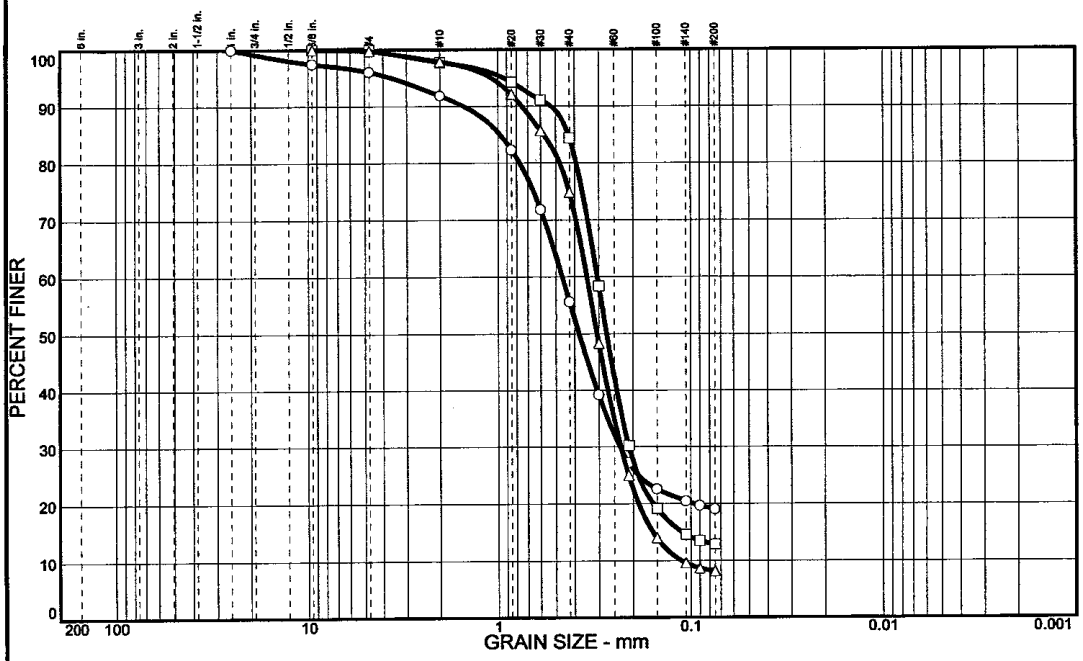
Project No.: 3769.GI Date/chk'd by: June 1999/WHS

Particle Size Distribution Report NJV-488



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		3.9	77.0	19.1		SM			
□			87.1	12.9		SP-SM			
△		0.2	91.6	8.2		SP-SM			

SIEVE inches size	PERCENT FINER ○	□	△
1	100.0		
3/8	97.5	100.0	100.0
	GRAIN SIZE		
D_{60}	0.464	0.305	0.346
D_{30}	0.233	0.209	0.231
D_{10}			0.112
	COEFFICIENTS		
C_c			1.38
C_u			3.10

SIEVE number size	PERCENT FINER ○	□	△
#4	96.1	100.0	99.8
#10	91.9	97.8	97.9
#20	82.3	94.3	92.1
#30	71.8	91.1	85.7
#40	55.6	84.4	74.8
#50	39.2	58.4	48.3
#70	27.2	30.2	25.0
#100	22.6	19.2	14.0
#140	20.5	14.6	9.6
#170	19.7	13.5	8.7
#200	19.1	12.9	8.2

SOIL DESCRIPTION

○ Dark-gray fine SAND and medium sand, little silt, trace coarse sand, trace gravel.

□ Gray/tan fine SAND, little medium sand, little silt, trace coarse sand.

△ Gray-tan fine SAND, some medium sand, trace silt, trace coarse sand.

REMARKS:

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○ Source: NJV488 Sample No.: S-1 Elev./Depth: 0.3'-3.0'

□ Source: NJV488 Sample No.: S-2 Elev./Depth: 3.0'-5.0'

△ Source: NJV488 Sample No.: S-3 Elev./Depth: 5.0'-7.6'

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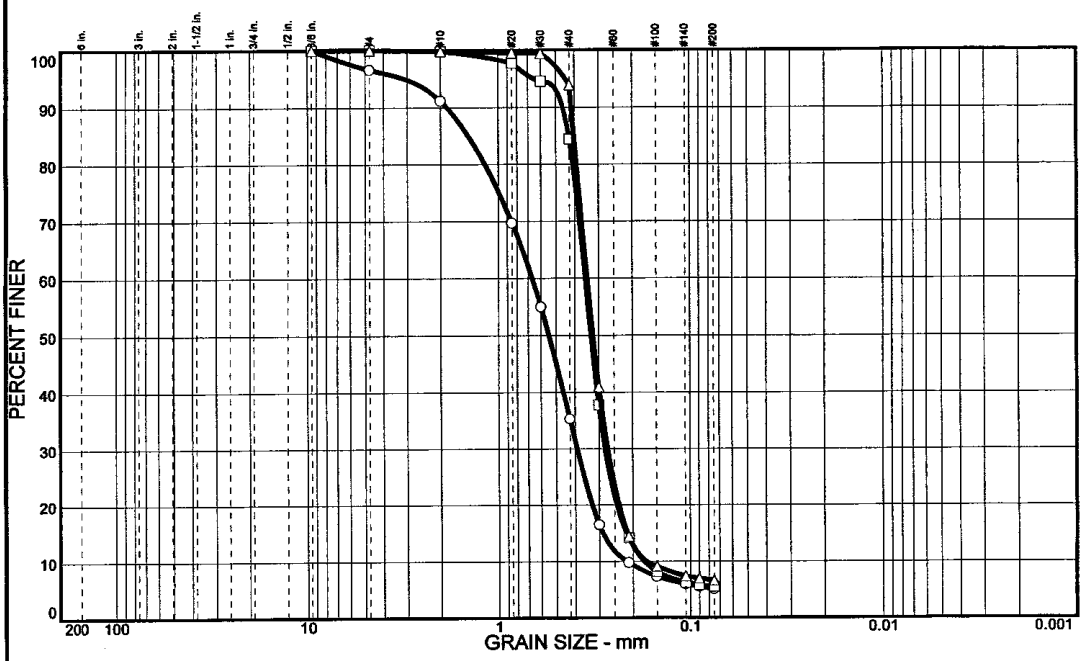
Particle Size Distribution Report NJV-488



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		3.4	91.5	5.1		SP-SM			
□			94.5	5.5		SP-SM			
△			93.4	6.6		SP-SM			

SIEVE inches size	PERCENT FINER ○	□	△
3/8	100.0	100.0	100.0
	GRAIN SIZE		
D_{60}	0.667	0.351	0.344
D_{30}	0.390	0.279	0.270
D_{10}	0.215	0.174	0.169
	COEFFICIENTS		
C_c	1.06	1.27	1.25
C_u	3.11	2.02	2.03

SIEVE number size	PERCENT FINER ○	□	△
#4	96.6	100.0	100.0
#10	91.2	99.8	99.8
#20	69.7	97.8	99.5
#30	55.0	94.6	99.4
#40	35.3	84.5	93.9
#50	16.5	37.8	41.0
#70	9.8	14.2	14.5
#100	7.3	8.2	9.1
#140	6.0	6.3	7.4
#170	5.5	5.8	7.0
#200	5.1	5.5	6.6

SOIL DESCRIPTION

○ Tan-gray medium SAND, some fine sand, trace coarse sand, trace silt, trace gravel.

□ Tan fine SAND, little medium sand, trace silt.

△ Tan fine SAND, trace silt, trace medium sand.

REMARKS:

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○ Source: NJV488 Sample No.: S-4 Elev./Depth: 7.6'-9.4'

□ Source: NJV488 Sample No.: S-5 Elev./Depth: 9.4'-10.0'

△ Source: NJV488 Sample No.: S-6 Elev./Depth: 10.0'-13.9'

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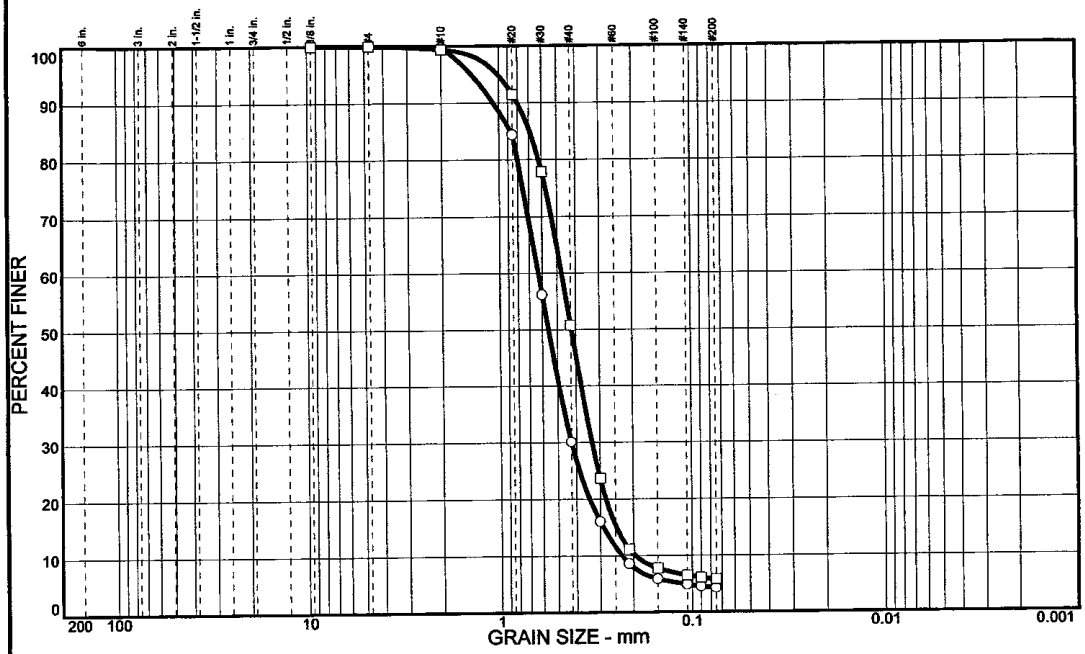
Particle Size Distribution Report NJV-488



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○			95.7	4.3		SP			
□			94.2	5.8		SP-SM			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □	
3/8	100.0	100.0	
	GRAIN SIZE		
D_{60}	0.628	0.473	
D_{30}	0.424	0.330	
D_{10}	0.230	0.194	
	COEFFICIENTS		
C_c	1.25	1.19	
C_u	2.74	2.43	

SIEVE number size	PERCENT FINER ○	PERCENT FINER □	
#4	100.0	100.0	
#10	99.7	99.4	
#20	84.4	91.5	
#30	56.2	77.9	
#40	30.1	50.8	
#50	16.1	23.7	
#70	8.6	11.2	
#100	5.9	7.8	
#140	4.9	6.5	
#170	4.5	6.1	
#200	4.3	5.8	

SOIL DESCRIPTION

○ Tan medium SAND, some fine sand, trace silt.

□ Tan medium SAND and fine sand, trace silt, trace coarse sand.

REMARKS:

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○ Source: NJV488 Sample No.: S-7 Elev./Depth: 13.9'-15.0'

□ Source: NJV488 Sample No.: S-8 Elev./Depth: 15.0'-18.9'

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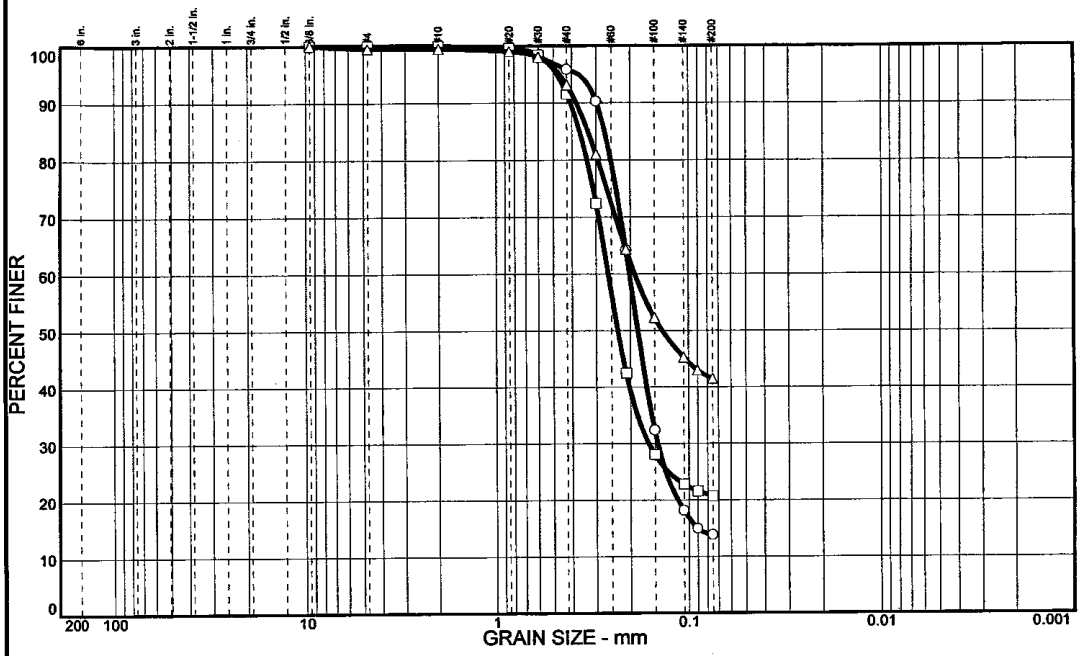
Particle Size Distribution Report NJV-489



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		0.3	85.8	13.9		SP-SM			
□			79.3	20.7		SM			
△		0.5	58.0	41.5		SM			

SIEVE inches size	PERCENT FINER ○	□	△
3/8	100.0	100.0	100.0
GRAIN SIZE			
D_{60}	0.201	0.259	0.189
D_{30}	0.145	0.161	
D_{10}			
COEFFICIENTS			
C_c			
C_u			

SIEVE number size	PERCENT FINER ○	□	△
#4	99.7	100.0	99.5
#10	99.6	100.0	99.5
#20	99.0	99.6	99.0
#30	98.1	98.4	98.0
#40	95.9	91.6	93.2
#50	90.3	72.4	81.0
#70	64.2	42.5	64.3
#100	32.4	28.1	52.3
#140	18.2	22.8	45.3
#170	15.0	21.6	43.0
#200	13.9	20.7	41.5

SOIL DESCRIPTION

○ Light-gray/dark-gray fine SAND, little silt, trace medium sand.

□ Light-gray/dark-gray fine SAND, some silt, trace medium sand.

△ Light-gray fine SAND and silt, trace medium sand, trace gravel.

REMARKS:

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○ Source: NJV489	Sample No.: S-1	Elev./Depth: 0.0'-4.8'
□ Source: NJV489	Sample No.: S-2	Elev./Depth: 4.8'-7.2'
△ Source: NJV489	Sample No.: S-3	Elev./Depth: 7.2'-9.6'

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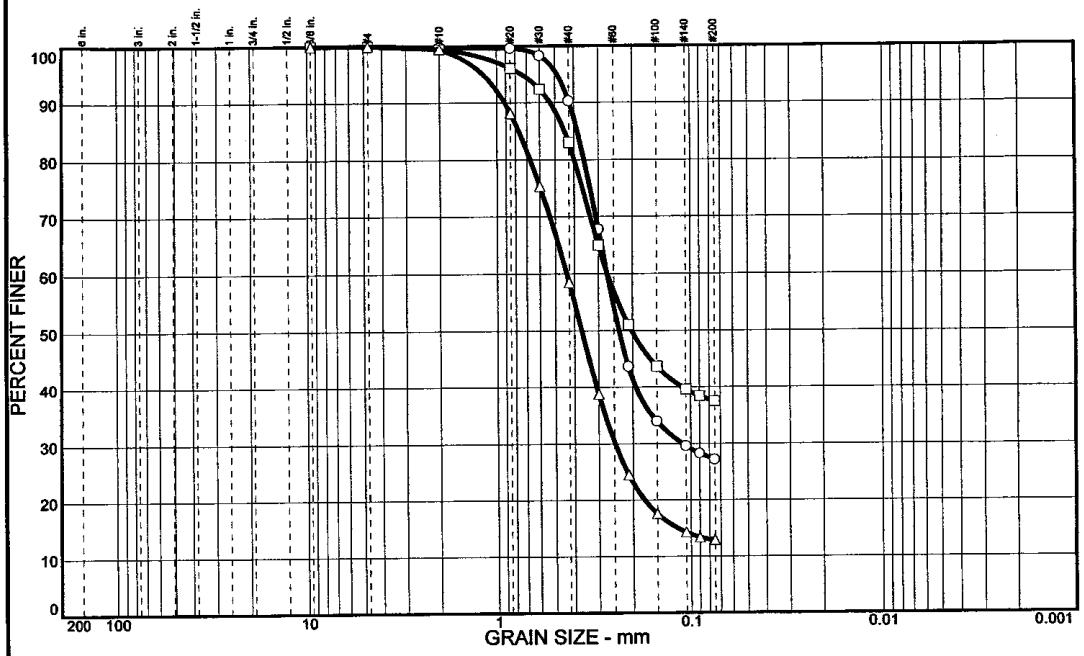

	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○			72.8	27.2		SM			
□			62.5	37.5					
△			87.1	12.9		SP-SM			

SIEVE inches size	PERCENT FINER ○	□	△
3/8	100.0	100.0	100.0
GRAIN SIZE			
D_{60}	0.271	0.269	0.437
D_{30}	0.111		0.247
D_{10}			
COEFFICIENTS			
C_c			
C_u			

SIEVE number size	PERCENT FINER ○	□	△
#4	100.0	100.0	100.0
#10	99.8	99.5	99.5
#20	99.6	96.1	88.1
#30	98.3	92.4	75.3
#40	90.3	83.0	58.5
#50	67.8	65.0	38.8
#70	43.7	51.1	24.5
#100	34.0	43.7	17.6
#140	29.6	39.6	14.3
#170	28.3	38.4	13.4
#200	27.2	37.5	12.9

SOIL DESCRIPTION

○ Light-gray fine SAND, some silt, trace medium sand.

□ Gray fine SAND and silt, little medium sand, trace coarse sand.

△ Gray fine SAND and medium sand, little silt, trace coarse sand.

REMARKS:

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○ Source: NJV489 Sample No.: S-4 Elev./Depth: 9.6'-10.9'

□ Source: NJV489 Sample No.: S-5 Elev./Depth: 10.9'-13.0'

△ Source: NJV489 Sample No.: S-6 Elev./Depth: 13.0'-14.4'

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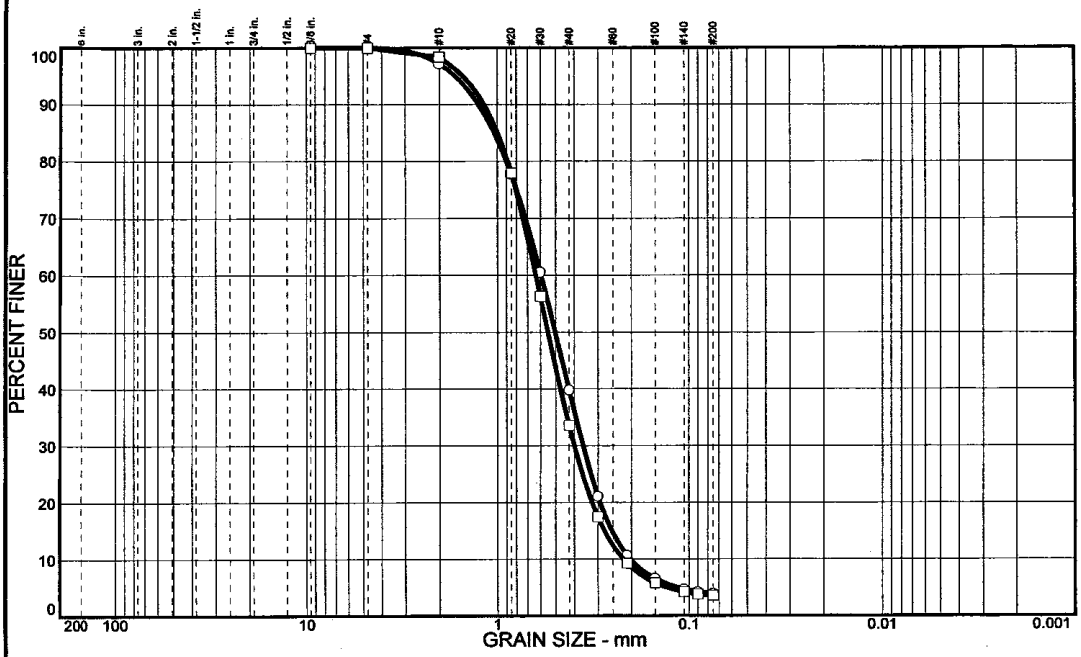
Client: U.S. Army Corps of Engineers

Project: Vibrocoring, New Jersey Coast, Lower Cape May Inlet PED, Contract #DACW-61-98-D-0008, Task Order #8.

Project No.: 3769.GI Date/chk'd by: June 1999/WHS

Particle Size Distribution Report NJV-489



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○			96.1	3.9		SP			
□			96.4	3.6		SP			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □
3/8	100.0	100.0
GRAIN SIZE		
D_{60}	0.595	0.633
D_{30}	0.359	0.399
D_{10}	0.202	0.220
COEFFICIENTS		
C_c	1.08	1.14
C_u	2.95	2.88

SIEVE number size	PERCENT FINER ○	PERCENT FINER □
#4	100.0	100.0
#10	97.2	98.4
#20	77.7	77.9
#30	60.5	56.3
#40	39.8	33.6
#50	21.1	17.5
#70	10.7	9.3
#100	6.6	5.8
#140	4.7	4.2
#170	4.2	3.8
#200	3.9	3.6

SOIL DESCRIPTION

○ Gray medium SAND and fine sand, trace silt, trace coarse sand.

□ Gray medium SAND, some fine sand, trace silt, trace coarse sand.

REMARKS:

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○ Source: NJV489 Sample No.: S-7 Elev./Depth: 14.4'-17.0'

□ Source: NJV489 Sample No.: S-8 Elev./Depth: 17.0'-19.9'

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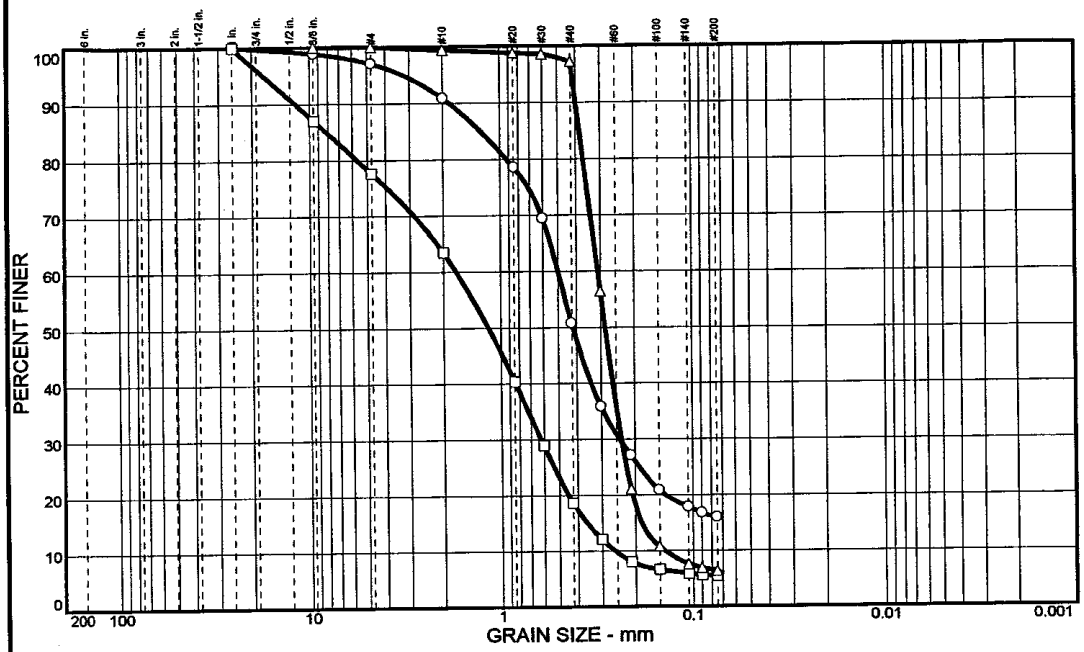
Project: Vibrocoring, New Jersey Coast, Lower Cape May Inlet PED, Contract #DACW-61-98-D-0008, Task Order #8.

Project No.: 3769.GI Date/chk'd by: June 1999/WHS

PARTICLE SIZE DISTRIBUTION REPORT NJV-490



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		2.9	81.1	16.0		SM			
□		22.3	72.2	5.5		SW-SM			
△			93.5	6.5		SP-SM			

SIEVE inches size	PERCENT FINER ○	□	△
1	100.0	100.0	
3/8	98.9	87.1	100.0
	GRAIN SIZE		
D_{60}	0.499	1.71	0.309
D_{30}	0.241	0.620	0.235
D_{10}		0.256	0.140
	COEFFICIENTS		
C_c		0.88	1.28
C_u		6.67	2.21

SIEVE number size	PERCENT FINER ○	□	△
#4	97.1	77.7	100.0
#10	90.9	63.5	99.4
#20	78.6	40.4	98.8
#30	69.5	28.9	98.6
#40	50.8	18.7	97.2
#50	35.8	12.1	56.5
#70	27.1	8.1	21.1
#100	20.9	6.7	10.8
#140	17.9	6.0	7.7
#170	16.8	5.7	7.0
#200	16.0	5.5	6.5

SOIL DESCRIPTION

○ Gray medium SAND, some fine sand, little silt, trace coarse sand, trace gravel.

□ Gray/tan medium SAND, some gravel, little coarse sand, little fine sand, trace silt.

△ Tan/gray fine SAND, trace silt, trace medium sand, trace coarse sand.

REMARKS:

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○ Source: NJV490 Sample No.: S-1 Elev./Depth: 0.0'-5.0'

□ Source: NJV490 Sample No.: S-2 Elev./Depth: 5.0'-8.7'

△ Source: NJV490 Sample No.: S-3 Elev./Depth: 8.7'-10.0'

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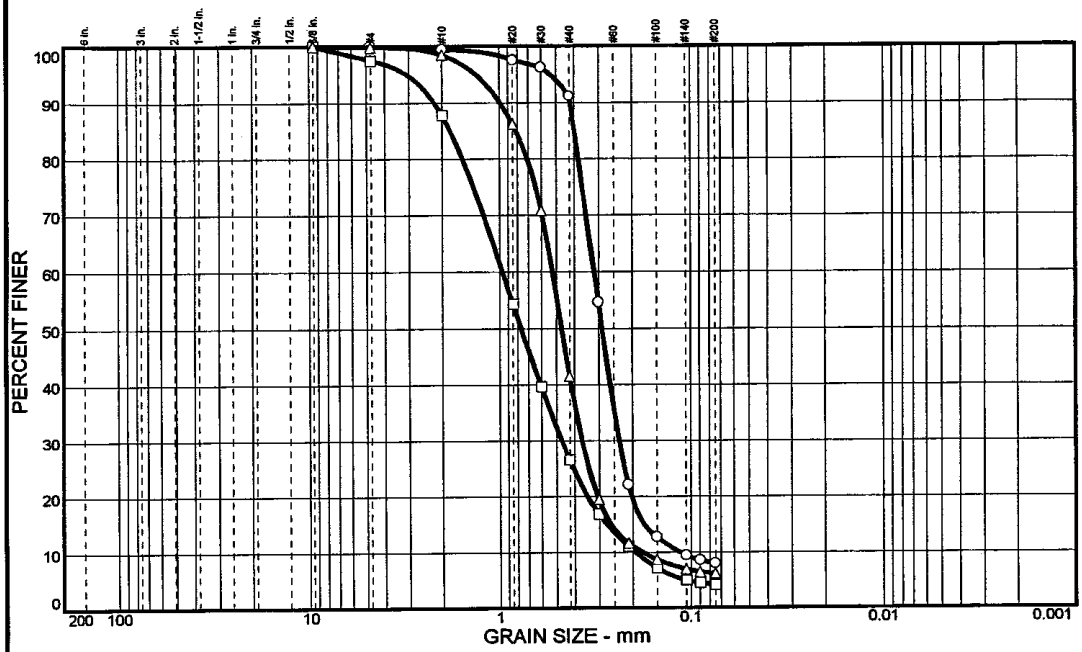
Project: Vibrocoring, Lower Cape May Meadows PED, Contract # DACW- 61-9-D-0008, Task Order #8

Project No.: 3769.GI Date/Chk'd by: June 1999/WHS

PARTICLE SIZE DISTRIBUTION REPORT NJV-490



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○			92.0	8.0		SP-SM			
□		2.4	93.4	4.2		SP			
△		0.1	93.7	6.2		SP-SM			

SIEVE inches size	PERCENT FINER ○	□	△
3/8	100.0	100.0	100.0
	GRAIN SIZE		
D_{60}	0.316	0.965	0.524
D_{30}	0.234	0.469	0.365
D_{10}	0.113	0.193	0.177
	COEFFICIENTS		
C_c	1.54	1.18	1.43
C_u	2.78	5.00	2.95

SIEVE number size	PERCENT FINER ○	□	△
#4	100.0	97.6	99.9
#10	99.4	87.8	98.5
#20	97.6	54.4	86.2
#30	96.3	39.7	70.8
#40	91.2	26.5	41.5
#50	54.6	16.9	19.5
#70	22.1	11.1	11.7
#100	12.8	7.2	8.7
#140	9.5	5.0	7.0
#170	8.6	4.5	6.5
#200	8.0	4.2	6.2

SOIL DESCRIPTION

○ Tan/gray fine SAND, trace medium sand, trace silt, trace coarse sand.

□ Light-gray medium SAND, some fine sand, trace coarse sand, trace silt, trace gravel.

△ Light-gray medium SAND, some fine sand, trace silt, trace coarse sand.

REMARKS:

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○ Source: NJV490 Sample No.: S-4 Elev./Depth: 10.0'-14.1'

□ Source: NJV490 Sample No.: S-5 Elev./Depth: 14.1'-15.0'

△ Source: NJV490 Sample No.: S-6 Elev./Depth: 15.0'-17.0'

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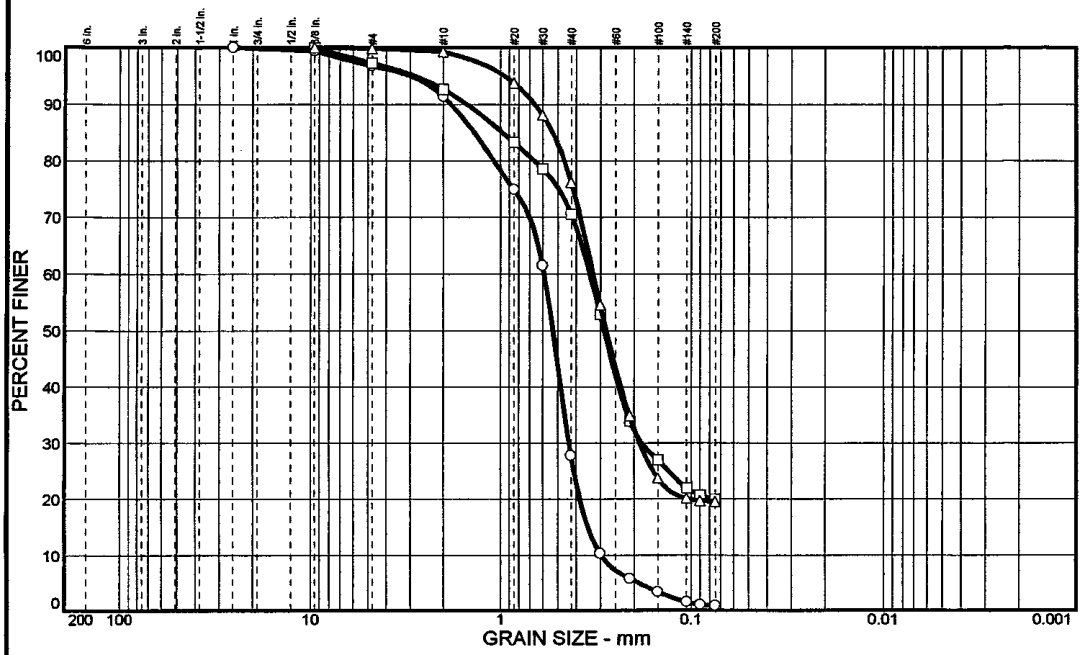
Project: Vibrocoring, Lower Cape May Meadows PED, Contract # DACW- 61-9-D-0008, Task Order #8

Project No.: 3769.GI Date/Chk'd by: June 1999/WHS

PARTICLE SIZE DISTRIBUTION REPORT NJV-491R1



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		3.2	95.9	0.9		SP			
□		2.7	77.3	20.0		SM			
△		0.1	80.4	19.5		SM			

SIEVE inches size	PERCENT FINER ○	□	△
1	100.0		
3/8	99.4	100.0	100.0
	GRAIN SIZE		
D_{60}	0.589	0.339	0.326
D_{30}	0.436	0.182	0.187
D_{10}	0.296		
	COEFFICIENTS		
C_c	1.09		
C_u	1.99		

SIEVE number size	PERCENT FINER ○	□	△
#4	96.8	97.3	99.9
#10	91.4	92.7	99.3
#20	74.9	83.3	93.8
#30	61.5	78.6	88.1
#40	27.7	70.6	76.2
#50	10.3	52.9	54.5
#70	5.8	33.9	34.8
#100	3.4	27.0	23.7
#140	1.6	22.0	20.1
#170	1.1	20.7	19.7
#200	0.9	20.0	19.5

SOIL DESCRIPTION

○ Tan medium SAND, some fine sand, trace coarse sand, trace gravel, trace silt.

□ Gray fine SAND, some medium sand, little silt, trace coarse sand, trace gravel.

△ Gray fine SAND, some medium sand, little silt, trace coarse sand.

REMARKS:

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○ Source: NJV491R1 Sample No.: S-1 Elev./Depth: 0.0'-1.0'
□ Source: NJV491R1 Sample No.: S-2 Elev./Depth: 1.0'-4.8'
△ Source: NJV491R1 Sample No.: S-3 Elev./Depth: 4.8'-8.8'

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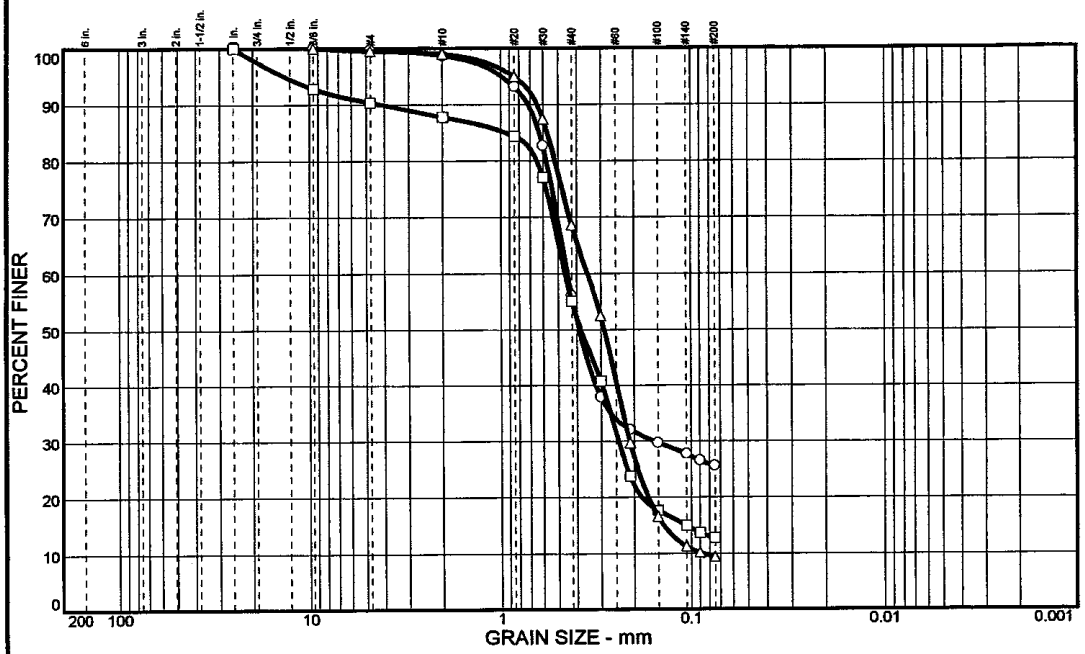
Project: Vibrocoring, Delaware Coast, Dewey/Rehoboth PED, Contract # DACW-61-98-D- 008, Task Order # 8
Project No.: 3769.GI Date/Chk'd by: June 1999/WHS

PARTICLE SIZE DISTRIBUTION REPORT NJV-492



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		0.3	74.1	25.6		SM			
□		9.6	77.5	12.9		SP-SM			
△		0.5	90.0	9.5		SP-SM			

SIEVE inches size	PERCENT FINER ○	□	△
1		100.0	
3/8	100.0	92.9	100.0
GRAIN SIZE			
D_{60}	0.447	0.460	0.351
D_{30}	0.158	0.242	0.211
D_{10}			0.0862
COEFFICIENTS			
C_c			1.47
C_u			4.07

SIEVE number size	PERCENT FINER ○	□	△
#4	99.7	90.4	99.5
#10	98.7	87.8	99.0
#20	93.2	84.4	95.0
#30	82.7	77.1	87.5
#40	56.1	55.1	68.6
#50	37.9	40.8	52.5
#70	32.1	23.7	29.7
#100	29.7	17.7	16.6
#140	27.7	15.0	11.3
#170	26.5	13.7	10.2
#200	25.6	12.9	9.5

SOIL DESCRIPTION

○ Dark-gray medium SAND, some fine sand, some silt, trace coarse sand.

□ Tan fine SAND, some medium sand, little silt, trace gravel, trace coarse sand.

△ Gray/tan fine SAND, some medium sand, trace silt, trace coarse sand, trace gravel.

REMARKS:

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○ Source: NJV492	Sample No.: S-1	Elev./Depth: 0.0-4.0'
□ Source: NJV492	Sample No.: S-2	Elev./Depth: 4.0'-5.0'
△ Source: NJV492	Sample No.: S-3	Elev./Depth: 5.0'-10.0'

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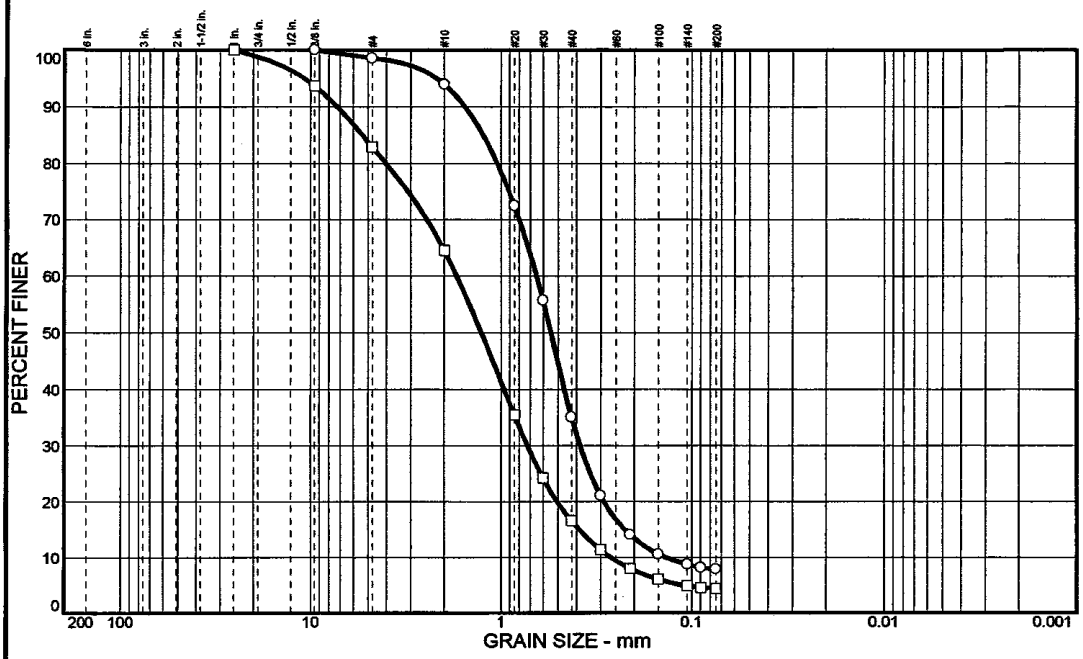
Project: Vibrocoring, Lower Cape May Meadows PED, Contract # DACW- 61-9-D-0008, Task Order #8

Project No.: 3769.GI Date/Chk'd by: June 1999/WHS

PARTICLE SIZE DISTRIBUTION REPORT NJV-492



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		1.4	90.7	7.9		SP-SM			
□		17.0	78.6	4.4		SW			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □
1		100.0
3/8	100.0	93.7
GRAIN SIZE		
D_{60}	0.649	1.71
D_{30}	0.383	0.725
D_{10}	0.137	0.265
COEFFICIENTS		
C_c	1.66	1.16
C_u	4.74	6.48

SIEVE number size	PERCENT FINER ○	PERCENT FINER □
#4	98.6	83.0
#10	94.0	64.6
#20	72.5	35.5
#30	55.7	24.2
#40	35.1	16.6
#50	21.1	11.4
#70	14.1	8.0
#100	10.6	6.1
#140	8.8	4.9
#170	8.2	4.6
#200	7.9	4.4

SOIL DESCRIPTION

○ Tan medium SAND, some fine sand, trace silt, trace coarse sand, trace gravel.

□ Tan medium SAND, little coarse sand, little gravel, little fine sand, trace silt.

REMARKS:

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○ Source: NJV492 Sample No.: S-4 Elev./Depth: 10.0'-13.0'

□ Source: NJV492 Sample No.: S-5 Elev./Depth: 13.0'-15.0'

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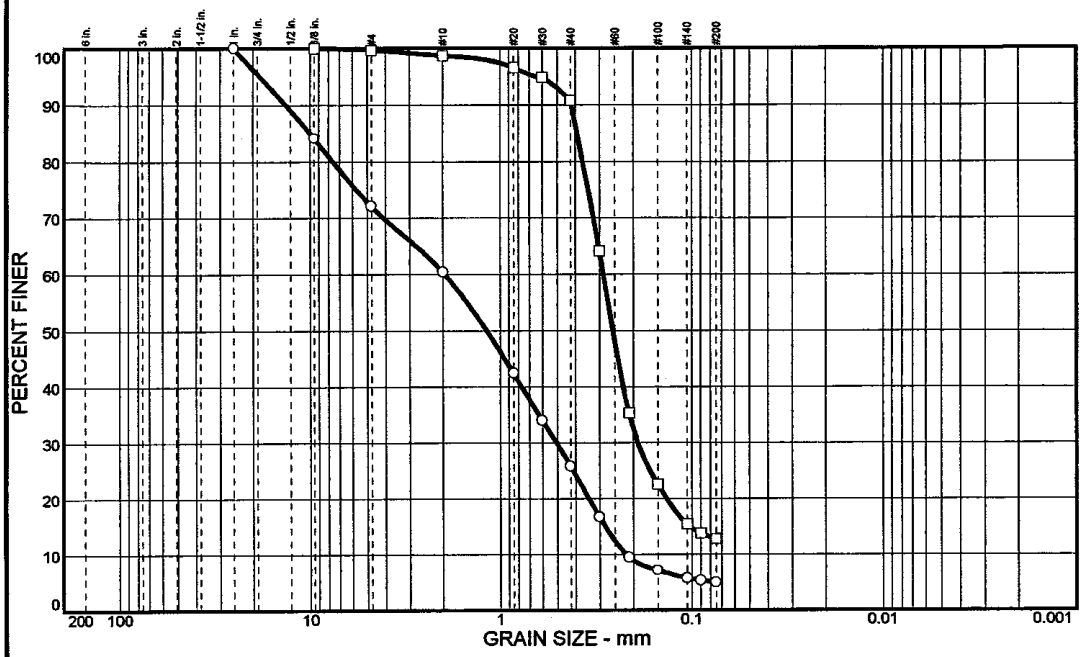
PARTICLE SIZE DISTRIBUTION REPORT NJV-492



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		27.9	67.1	5.0		SW			
□		0.3	86.9	12.8		SP-SM			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □
1	100.0	
3/8	84.2	100.0
GRAIN SIZE		
D_{60}	1.95	0.286
D_{30}	0.506	0.190
D_{10}	0.218	
COEFFICIENTS		
C_c	0.60	
C_u	8.96	

SIEVE number size	PERCENT FINER ○	PERCENT FINER □
#4	72.1	99.7
#10	60.4	98.7
#20	42.4	96.6
#30	34.0	94.9
#40	25.8	90.8
#50	16.7	64.2
#70	9.5	35.3
#100	7.2	22.6
#140	5.8	15.4
#170	5.4	13.8
#200	5.0	12.8

SOIL DESCRIPTION

○ Tan medium SAND, some gravel, some fine sand, little coarse sand, trace silt.

□ Tan fine SAND, little silt, trace medium sand, trace coarse sand.

REMARKS:

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○ Source: NJV492 Sample No.: S-6 Elev./Depth: 15.0'-18.3'

□ Source: NJV492 Sample No.: S-7 Elev./Depth: 18.3'-20.0'

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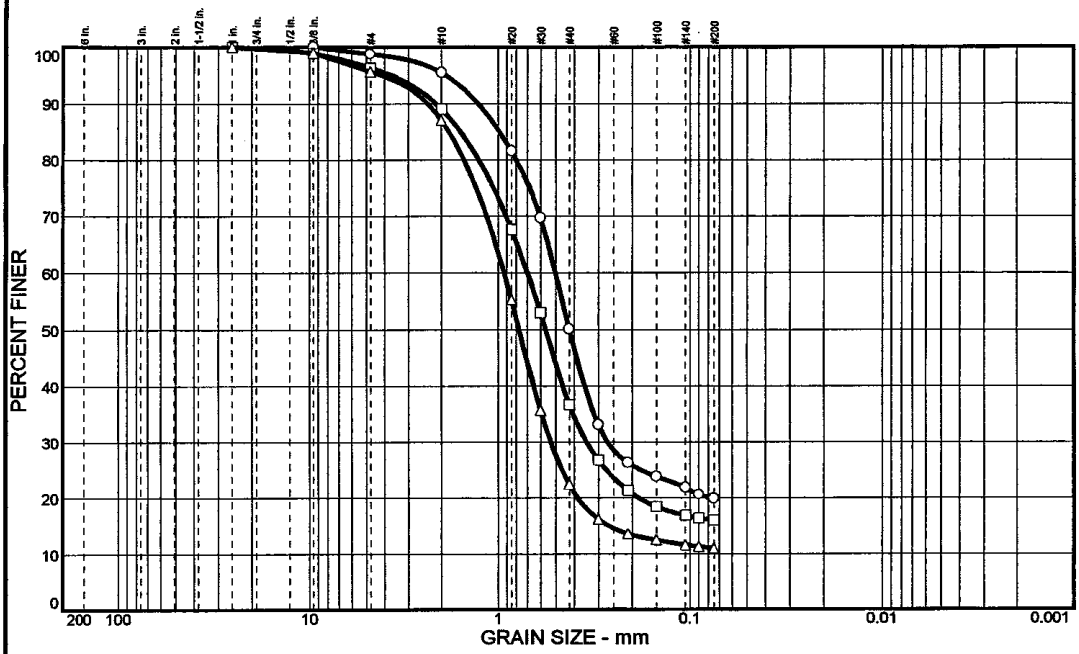
PARTICLE SIZE DISTRIBUTION REPORT NJV-493



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		1.2	78.9	19.9		SM			
□		3.6	80.4	16.0		SM			
△		4.3	84.7	11.0		SP-SM			

SIEVE inches size	PERCENT FINER ○	□	△
1		100.0	100.0
3/8	100.0	98.9	99.0
	GRAIN SIZE		
D_{60}	0.501	0.700	0.928
D_{30}	0.269	0.345	0.530
D_{10}			
	COEFFICIENTS		
C_c			
C_u			

SIEVE number size	PERCENT FINER ○	□	△
#4	98.8	96.4	95.7
#10	95.5	89.1	87.1
#20	81.6	67.7	55.3
#30	69.7	53.0	35.7
#40	50.1	36.7	22.4
#50	33.1	26.8	16.2
#70	26.3	21.3	13.6
#100	23.8	18.4	12.5
#140	21.8	16.9	11.6
#170	20.6	16.4	11.3
#200	19.9	16.0	11.0

SOIL DESCRIPTION

○ Gray medium SAND, some fine sand, little silt, trace coarse sand, trace gravel.

□ Gray medium SAND, some fine sand, little silt, trace coarse sand, trace gravel.

△ Gray medium SAND, little fine sand, little silt, trace coarse sand, trace gravel.

REMARKS:

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○ Source: NJV493 Sample No.: S-1 Elev./Depth: 0.0'-3.0'

□ Source: NJV493 Sample No.: S-2 Elev./Depth: 3.0'-5.1'

△ Source: NJV493 Sample No.: S-3 Elev./Depth: 5.1'-7.1'

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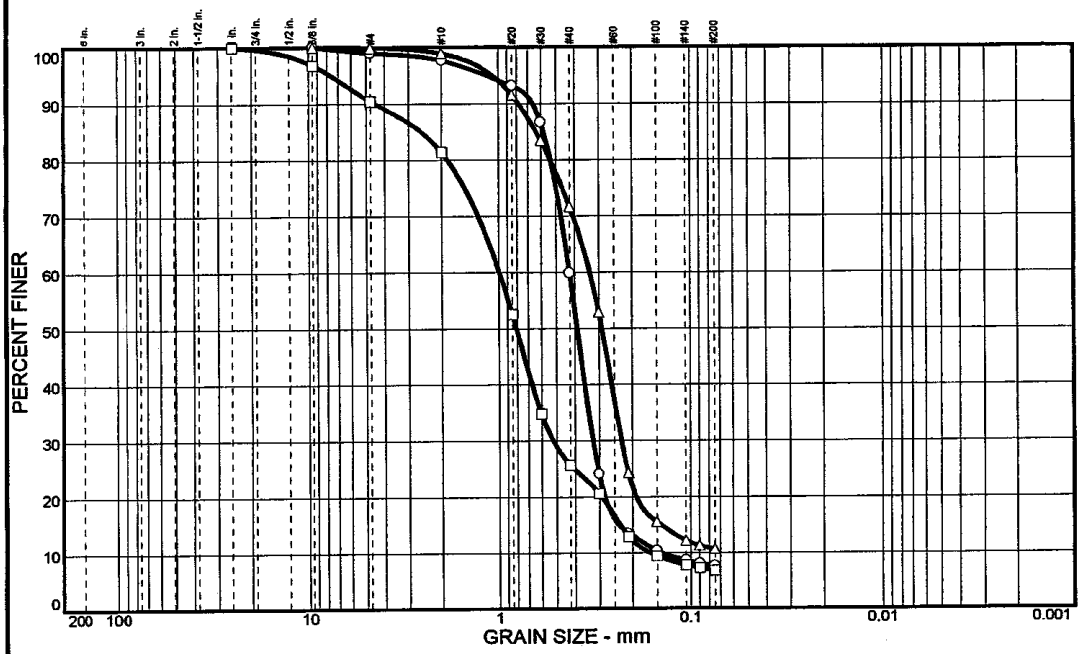
PARTICLE SIZE DISTRIBUTION REPORT NJV-493



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		1.0	91.3	7.7		SP-SM			
□		9.5	83.7	6.8		SW-SM			
△		0.1	89.2	10.7		SP-SM			

SIEVE inches size	PERCENT FINER ○	□	△
1		100.0	
3/8	100.0	96.9	100.0
	GRAIN SIZE		
D_{60}	0.425	0.991	0.333
D_{30}	0.322	0.521	0.229
D_{10}	0.141	0.162	
	COEFFICIENTS		
C_c	1.73	1.70	
C_u	3.01	6.13	

SIEVE number size	PERCENT FINER ○	□	△
#4	99.0	90.5	99.9
#10	97.7	81.4	98.9
#20	93.2	52.6	91.6
#30	86.7	34.8	83.5
#40	59.9	25.7	71.7
#50	24.1	20.6	52.9
#70	13.6	13.0	24.3
#100	10.4	9.5	15.6
#140	8.7	7.8	12.2
#170	8.1	7.3	11.3
#200	7.7	6.8	10.7

SOIL DESCRIPTION

○ Gray/tan fine SAND and medium sand, trace silt, trace coarse sand, trace gravel.

□ Gray medium SAND, little fine sand, trace gravel, trace coarse sand, trace silt.

△ Gray/brown/tan fine SAND, some medium sand, little silt, trace coarse sand.

REMARKS:

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○ Source: NJV493 Sample No.: S-4 Elev./Depth: 7.1'-10.0'

□ Source: NJV493 Sample No.: S-5 Elev./Depth: 10.0'-11.4'

△ Source: NJV493 Sample No.: S-6 Elev./Depth: 12.1'-15.0'

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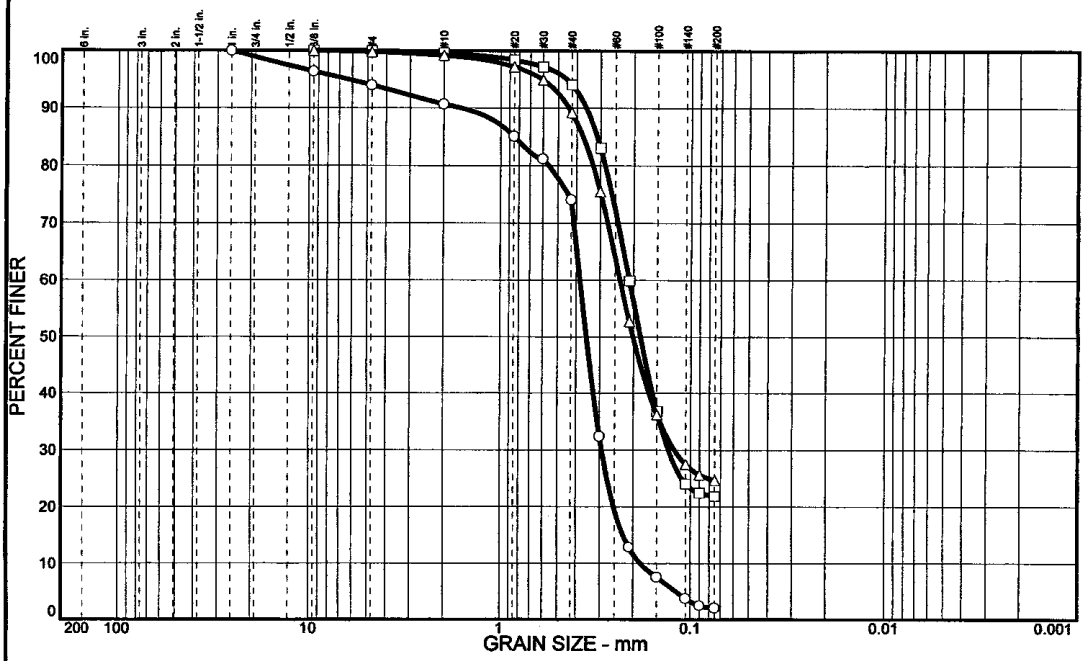
Client: U.S. Army Corps of Engineers

Project: Vibrocoring, New Jersey Coast, Lower Cape May Meadows PED, Contract # DACW-61-9-D-0008, Task Order #8

Project No.: 3769.GI Date/Chk'd by: June 1999/WHS

Particle Size Distribution Report NJV-494



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		6.0	91.9	2.1		SP			
□			78.1	21.9		SM			
△		0.2	75.1	24.7		SM			

SIEVE inches size	PERCENT FINER ○	□	△
1	100.0		
3/8	96.4	100.0	100.0
GRAIN SIZE			
D_{60}	0.382	0.210	0.235
D_{30}	0.292	0.130	0.121
D_{10}	0.183		
COEFFICIENTS			
C_c	1.22		
C_u	2.09		

SIEVE number size	PERCENT FINER ○	□	△
#4	94.0	100.0	99.8
#10	90.7	99.6	99.2
#20	85.1	98.4	97.2
#30	81.2	97.2	94.9
#40	74.1	94.1	89.2
#50	32.4	83.1	75.5
#70	12.9	59.9	52.7
#100	7.6	36.8	36.2
#140	3.8	24.1	27.5
#170	2.5	22.5	25.7
#200	2.1	21.9	24.7

SOIL DESCRIPTION

○ Tan fine SAND, little medium sand, trace gravel, trace coarse sand, trace silt.

□ Dark-brown fine SAND, some silt, trace medium sand.

△ Dark-brown fine SAND, some silt, trace medium sand, trace coarse sand.

REMARKS:

○

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○ Source: NJV494 Sample No.: S-1 Elev./Depth: 0.0'-0.7'
□ Source: NJV494 Sample No.: S-3 Elev./Depth: 4.1'-5.3'
△ Source: NJV494 Sample No.: S-4 Elev./Depth: 5.3'-6.5'

DUFFIELD ASSOCIATES
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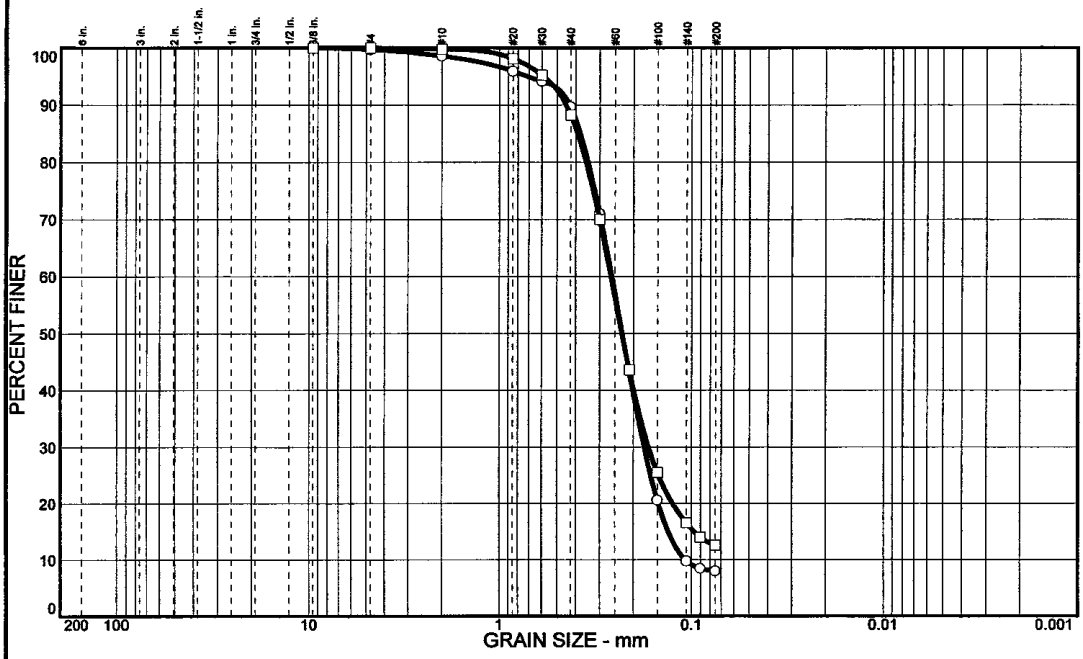
Particle Size Distribution Report NJV-494



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		0.3	91.7	8.0		SP-SM			
□			87.4	12.6		SP-SM			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □	
3/8	100.0	100.0	
	GRAIN SIZE		
D_{60}	0.259	0.262	
D_{30}	0.175	0.167	
D_{10}	0.108		
	COEFFICIENTS		
C_c	1.10		
C_u	2.41		

SIEVE number size	PERCENT FINER ○	PERCENT FINER □	
#4	99.7	100.0	
#10	98.6	99.8	
#20	95.9	98.1	
#30	94.1	95.2	
#40	89.7	88.3	
#50	71.0	70.0	
#70	43.4	43.6	
#100	20.6	25.5	
#140	9.8	16.6	
#170	8.5	14.0	
#200	8.0	12.6	

SOIL DESCRIPTION

○ Light-gray fine SAND, trace medium sand, trace silt, trace coarse sand.

□ Light-gray fine SAND, little silt, little medium sand.

REMARKS:

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○ Source: NJV494 Sample No.: S-5 Elev./Depth: 6.5'-10.1'

□ Source: NJV494 Sample No.: S-6 Elev./Depth: 10.1'-11.7'

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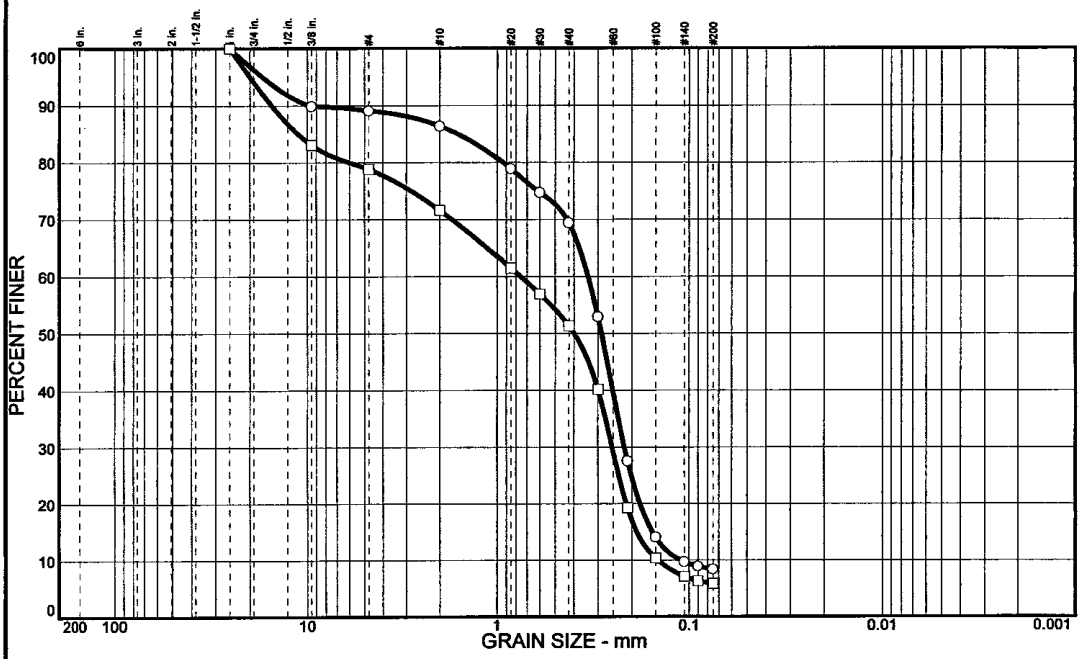
Particle Size Distribution Report NJV-494



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		10.9	80.7	8.4		SP-SM			
□		21.2	73.0	5.8		SP-SM			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □
1	100.0	100.0
3/8	89.9	83.1
GRAIN SIZE		
D_{60}	0.338	0.756
D_{30}	0.218	0.253
D_{10}	0.111	0.146
COEFFICIENTS		
C_c	1.27	0.58
C_u	3.04	5.20

SIEVE number size	PERCENT FINER ○	PERCENT FINER □
#4	89.1	78.8
#10	86.4	71.6
#20	78.9	61.5
#30	74.7	56.9
#40	69.4	51.3
#50	52.9	40.2
#70	27.6	19.3
#100	14.1	10.4
#140	9.7	7.1
#170	8.9	6.3
#200	8.4	5.8

SOIL DESCRIPTION

○ Light gray fine SAND, little medium sand, little gravel, trace silt, trace coarse sand.

□ Light-gray fine SAND, some gravel, little medium sand, trace coarse sand, trace silt.

REMARKS:

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□

○ Source: NJV494 Sample No.: S-7 Elev./Depth: 12.1'-15.0'

□ Source: NJV494 Sample No.: S-8 Elev./Depth: 15.0'-16.3'

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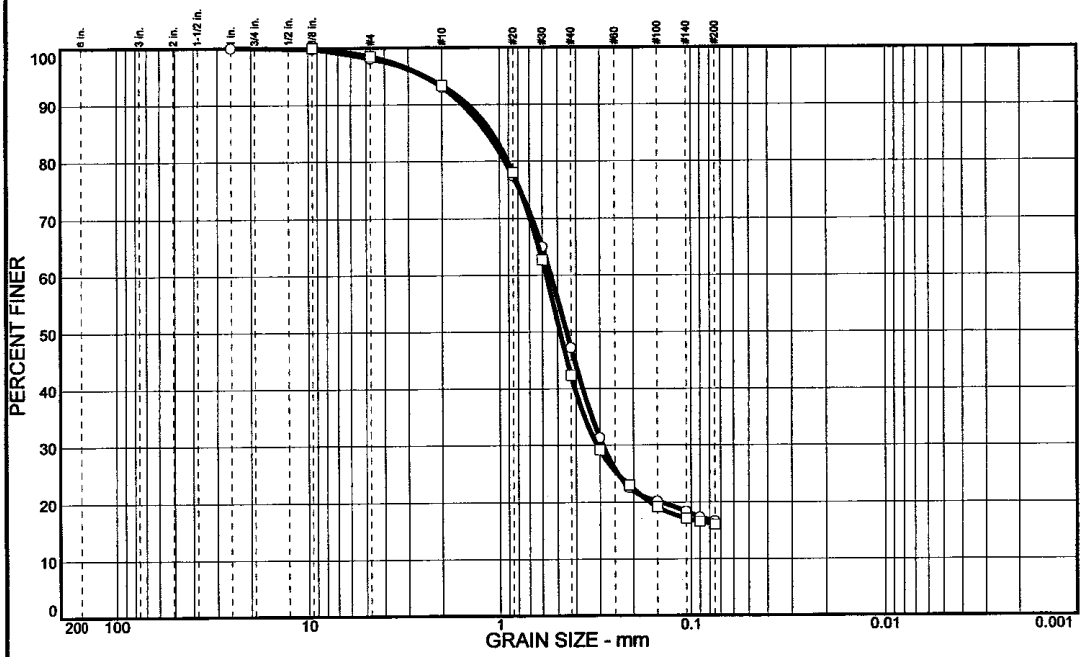
Particle Size Distribution Report NJV-495R1



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		1.9	81.4	16.7		SM			
□		1.5	82.4	16.1		SM			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □
1	100.0	
3/8	99.8	100.0
GRAIN SIZE		
D_{60}	0.541	0.572
D_{30}	0.289	0.309
D_{10}		
COEFFICIENTS		
C_c		
C_u		

SIEVE number size	PERCENT FINER ○	PERCENT FINER □
#4	98.1	98.5
#10	93.1	93.4
#20	77.4	78.0
#30	65.0	62.7
#40	47.2	42.4
#50	31.3	29.2
#70	22.6	23.0
#100	20.2	19.2
#140	18.4	17.2
#170	17.4	16.6
#200	16.7	16.1

SOIL DESCRIPTION

○ Tan/gray/orange medium SAND, some fine sand, littlesilt, trace coarse sand, trace gravel.

□ Tan/gray/orange mediumn SAND, some fine sand, littlesilt, trace coarse sand, trace gravel.

REMARKS:

○

□

○ Source: NJV495R1 Sample No.: S-1 Elev./Depth: 0.0'-5.0'

□ Source: NJV495R1 Sample No.: S-2 Elev./Depth: 5.0'-10.0'

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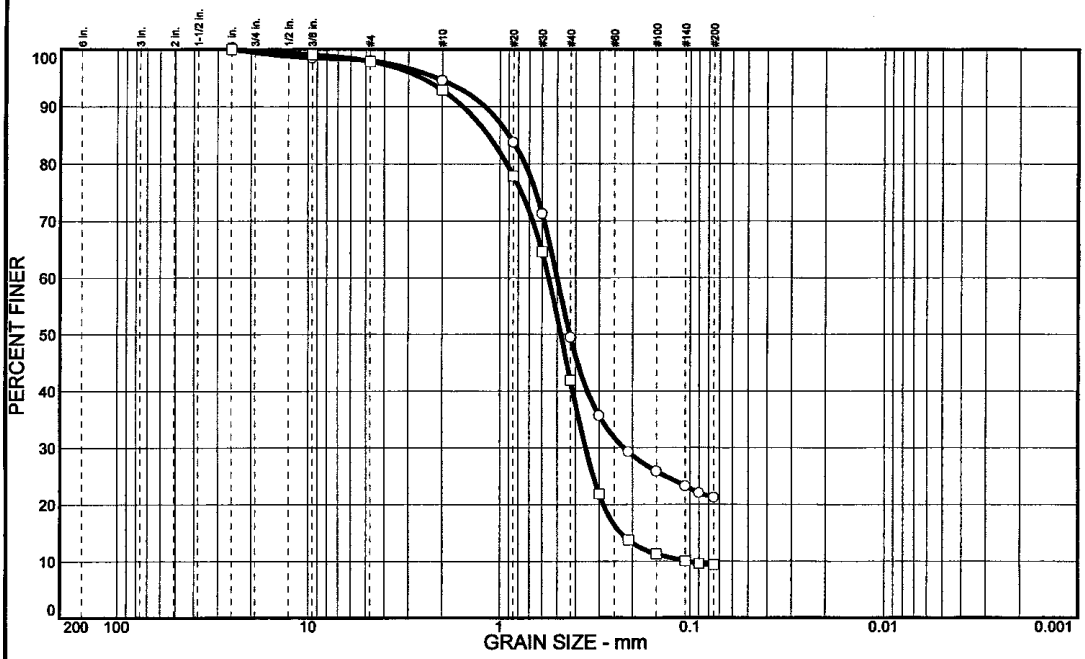
Particle Size Distribution Report NJV-495R1



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		2.0	76.7	21.3		SM			
□		2.1	88.5	9.4		SP-SM			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □
1	100.0	100.0
3/8	98.5	99.1
GRAIN SIZE		
D_{60}	0.501	0.554
D_{30}	0.222	0.353
D_{10}		0.103
COEFFICIENTS		
C_c		2.19
C_u		5.39

SIEVE number size	PERCENT FINER ○	PERCENT FINER □
#4	98.0	97.9
#10	94.6	92.9
#20	83.8	77.9
#30	71.3	64.6
#40	49.5	41.9
#50	35.7	21.9
#70	29.3	13.8
#100	25.9	11.3
#140	23.3	10.1
#170	22.1	9.6
#200	21.3	9.4

SOIL DESCRIPTION

○ Tan/gray/orange medium SAND, some fine sand, some silt, trace coarse sand, trace gravel.

□ Gray/white medium SAND, some fine sand, trace silt, trace coarse sand, trace gravel.

REMARKS:

○

□

○ Source: NJV495R1 Sample No.: S-3 Elev./Depth: 10.0'-12.4'

□ Source: NJV495R1 Sample No.: S-4 Elev./Depth: 12.4'-13.3'

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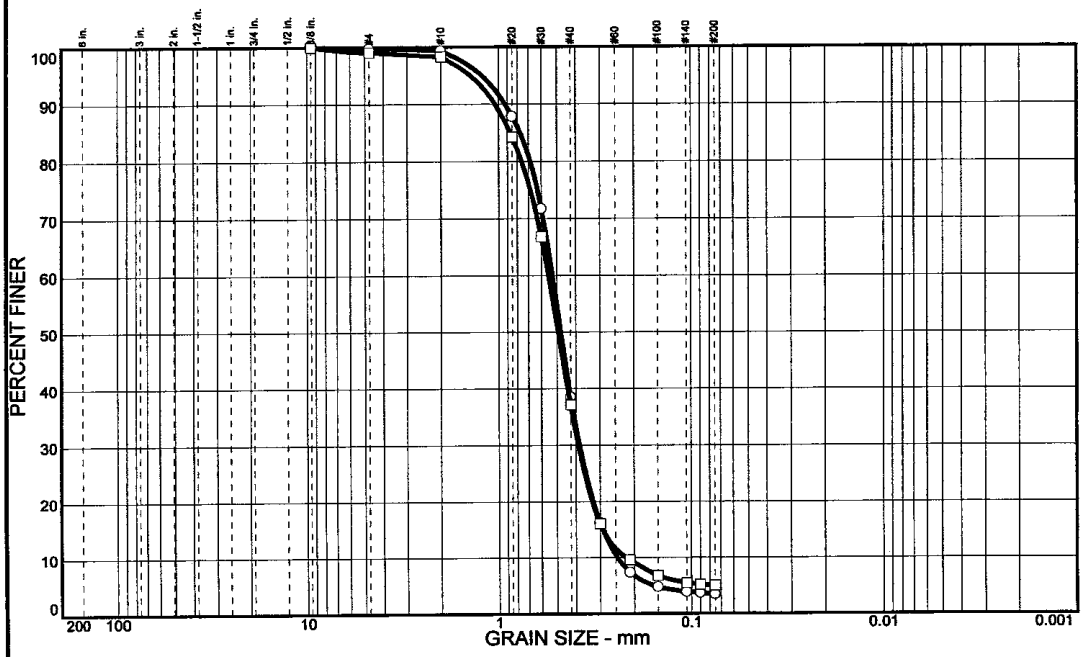
Particle Size Distribution Report NJV-495R2



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		0.2	96.3	3.5		SP			
□		0.9	94.1	5.0		SP			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □
3/8	100.0	100.0
GRAIN SIZE		
D_{60}	0.527	0.551
D_{30}	0.383	0.387
D_{10}	0.244	0.219
COEFFICIENTS		
C_c	1.14	1.24
C_u	2.16	2.51

SIEVE number size	PERCENT FINER ○	PERCENT FINER □
#4	99.8	99.1
#10	99.4	98.3
#20	87.9	84.3
#30	71.7	66.8
#40	38.6	37.2
#50	16.3	16.1
#70	7.4	9.6
#100	4.8	6.8
#140	3.9	5.5
#170	3.7	5.2
#200	3.5	5.0

SOIL DESCRIPTION

○ Gray/white medium SAND, some fine sand, trace silt

□ Gray/white medium SAND, some fine sand, trace silt, trace gravel, trace coarse sand.

REMARKS:

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○ Source: NJV495R2 Sample No.: S-1 Elev./Depth: 11.4'-16.4'

□ Source: NJV495R2 Sample No.: S-2 Elev./Depth: 16.4'-21.3'

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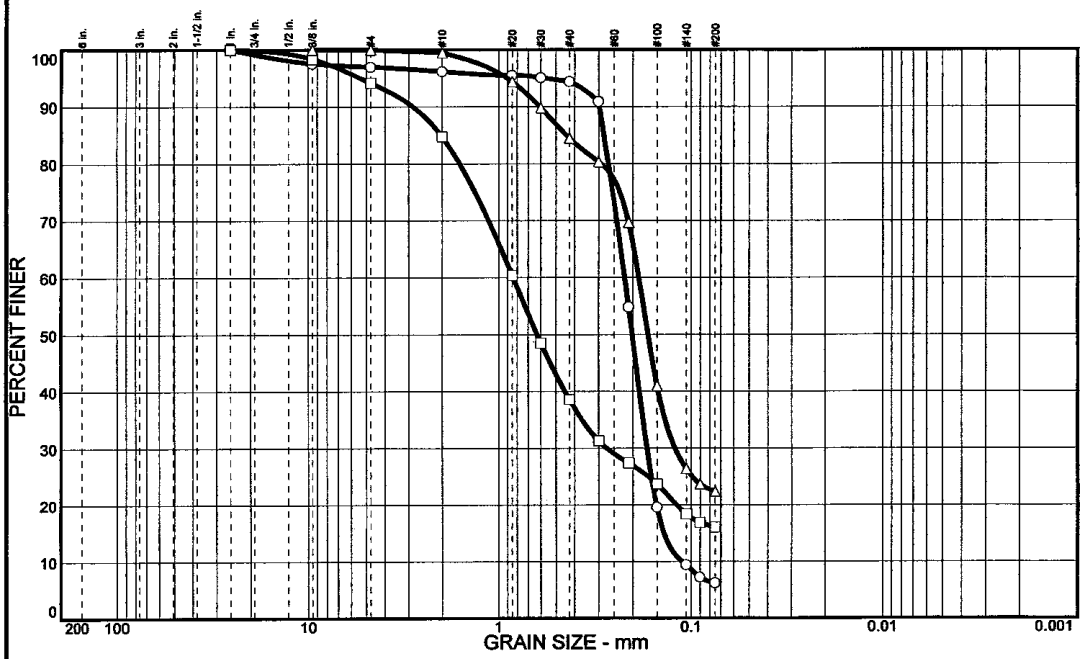
Particle Size Distribution Report NJV-496



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		3.0	90.8	6.2		SP-SM			
□		5.8	78.1	16.1		SM			
△			77.6	22.4		SM			

SIEVE inches size	PERCENT FINER ○	□	△
1	100.0	100.0	
3/8	97.6	98.4	100.0
GRAIN SIZE			
D_{60}	0.220	0.840	0.186
D_{30}	0.169	0.273	0.121
D_{10}	0.111		
COEFFICIENTS			
C_c	1.17		
C_u	1.98		

SIEVE number size	PERCENT FINER ○	□	△
#4	97.0	94.2	100.0
#10	96.2	84.8	99.5
#20	95.5	60.4	94.4
#30	95.1	48.5	89.8
#40	94.4	38.6	84.5
#50	90.9	31.3	80.3
#70	54.8	27.4	69.6
#100	19.6	23.7	41.0
#140	9.4	18.4	26.4
#170	7.2	16.9	23.7
#200	6.2	16.1	22.4

SOIL DESCRIPTION

○ Tan fine SAND, trace silt, trace gravel, trace medium sand, trace coarse sand.

□ Gray medium SAND, some fine sand, little silt, trace coarse sand, trace gravel.

△ Dark gray fine SAND, some silt, little medium sand, trace coarse sand.

REMARKS:

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○ Source: NJV496 Sample No.: S-1 Elev./Depth: 0.0'-1.5'
□ Source: NJV496 Sample No.: S-2 Elev./Depth: 1.7'-4.9'
△ Source: NJV496 Sample No.: S-3 Elev./Depth: 4.9'-9.8'

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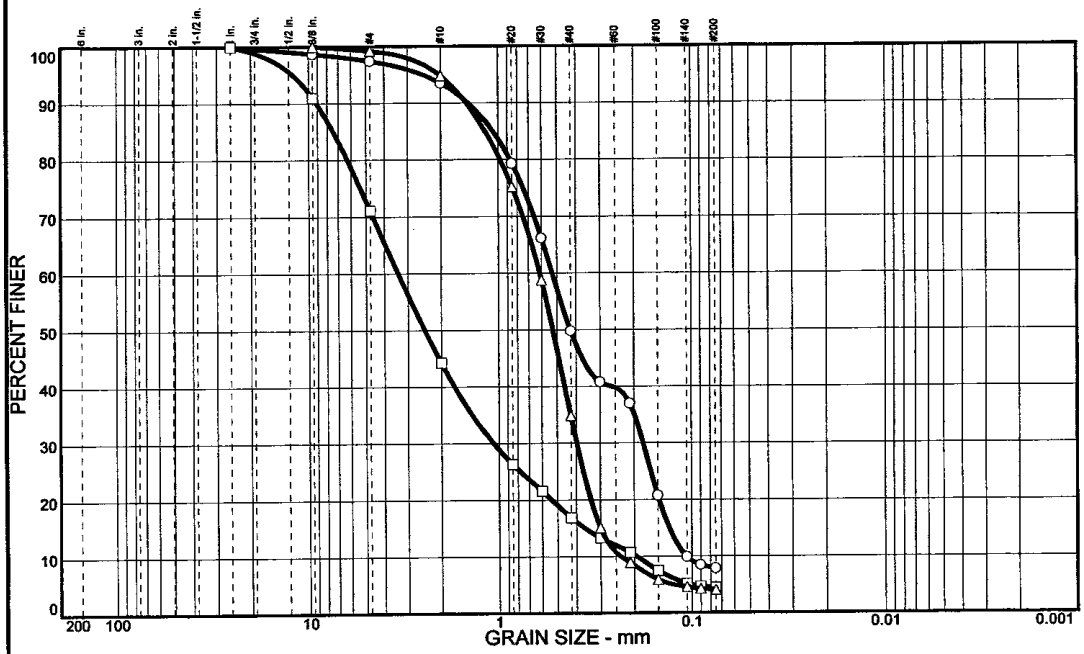
Particle Size Distribution Report NJV-496



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		2.6	89.5	7.9		SP-SM			
□		28.9	66.6	4.5		SW			
△		0.8	95.1	4.1		SP			

SIEVE inches size	PERCENT FINER ○	□	△
1	100.0	100.0	
3/8	98.7	91.0	100.0
	GRAIN SIZE		
D_{60}	0.528	3.38	0.612
D_{30}	0.179	1.06	0.396
D_{10}	0.107	0.194	0.236
	COEFFICIENTS		
C_c	0.57	1.73	1.09
C_u	4.95	17.39	2.60

SIEVE number size	PERCENT FINER ○	□	△
#4	97.4	71.1	99.2
#10	93.5	44.3	94.8
#20	79.3	26.3	75.2
#30	66.2	21.6	58.8
#40	49.8	16.9	34.8
#50	40.8	13.3	15.1
#70	37.0	10.7	8.9
#100	20.8	7.5	5.9
#140	9.9	5.2	4.6
#170	8.5	4.7	4.3
#200	7.9	4.5	4.1

SOIL DESCRIPTION

○ Dark gray medium SAND and fine sand, trace fines, trace coarse sand, trace gravel.

□ Gray medium to coarse SAND, some gravel, little fine sand, trace silt.

△ Tan medium SAND, some fine sand, trace coarse sand, trace silt, trace gravel.

REMARKS:

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○ Source: NJV496 Sample No.: S-4 Elev./Depth: 9.8'-11.9'

□ Source: NJV496 Sample No.: S-5 Elev./Depth: 11.9'-14.7'

△ Source: NJV496 Sample No.: S-6 Elev./Depth: 14.7'-20.0'

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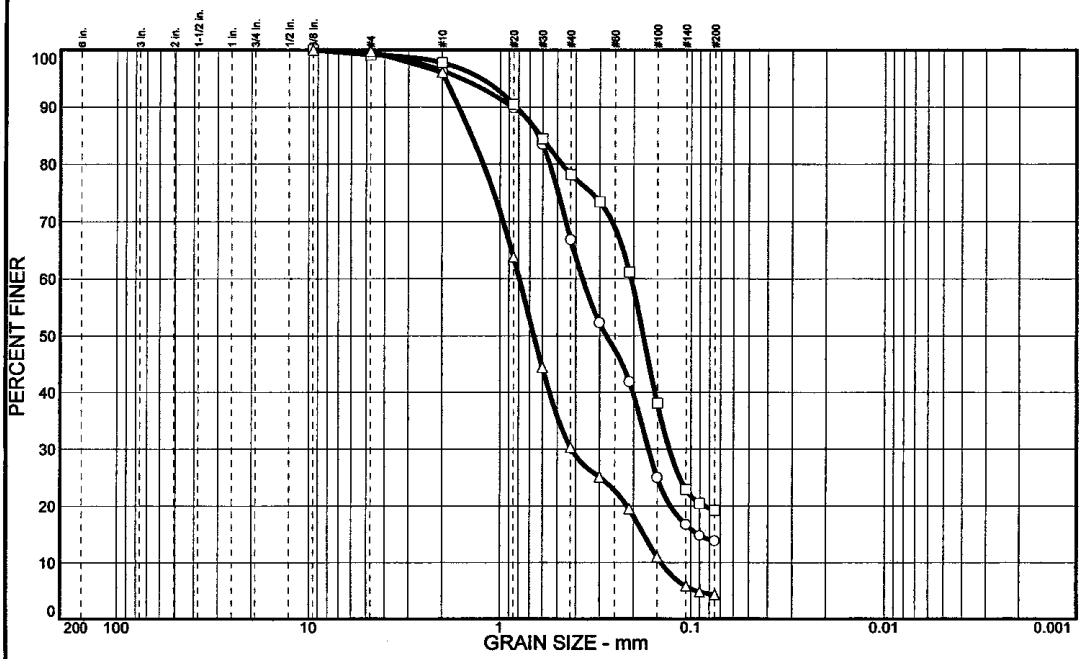
Particle Size Distribution Report NJV-497



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		0.5	85.6	13.9		SP-SM			
□		0.8	79.9	19.3		SM			
△		0.2	95.5	4.3		SP			

SIEVE inches size	PERCENT FINER ○	□	△
3/8	100.0	100.0	100.0
GRAIN SIZE			
D_{60}	0.368	0.206	0.792
D_{30}	0.167	0.130	0.420
D_{10}			0.143
COEFFICIENTS			
C_c			1.56
C_u			5.54

SIEVE number size	PERCENT FINER ○	□	△
#4	99.5	99.2	99.8
#10	96.4	97.8	96.1
#20	89.9	90.5	63.8
#30	83.5	84.5	44.4
#40	66.9	78.2	30.3
#50	52.3	73.4	25.1
#70	41.9	61.2	19.5
#100	25.0	38.1	11.0
#140	16.8	22.9	5.8
#170	14.8	20.5	4.8
#200	13.9	19.3	4.3

SOIL DESCRIPTION

○ Gray fine SAND, some medium sand, little silt, trace coarse sand, trace gravel.

□ Gray fine SAND, little medium sand, little silt, trace coarse sand, trace gravel.

△ Gray medium SAND, some fine sand, trace silt, trace coarse sand.

REMARKS:

○

□

△

○ Source: NJV497 Sample No.: S-2 Elev./Depth: 1.0'-4.3'
□ Source: NJV497 Sample No.: S-3 Elev./Depth: 4.7'-7.0'
△ Source: NJV497 Sample No.: S-4 Elev./Depth: 7.0'-9.6'

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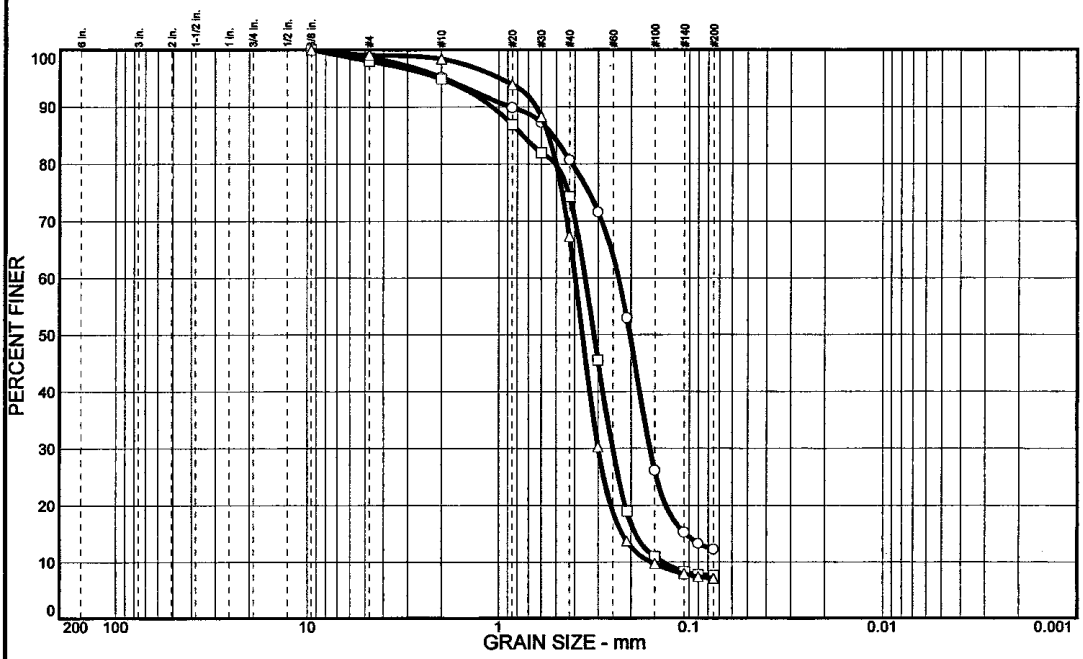

	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		1.3	86.4	12.3		SP-SM			
□		2.0	90.4	7.6		SP-SM			
△		0.9	92.0	7.1		SP-SM			

SIEVE inches size	PERCENT FINER ○	□	△
3/8	100.0	100.0	100.0
GRAIN SIZE			
D_{60}	0.233	0.351	0.396
D_{30}	0.159	0.250	0.299
D_{10}		0.136	0.157
COEFFICIENTS			
C_c		1.32	1.44
C_u		2.58	2.53

SIEVE number size	PERCENT FINER ○	□	△
#4	98.7	98.0	99.1
#10	95.2	94.9	98.4
#20	89.9	86.9	93.9
#30	87.3	82.0	88.3
#40	80.7	74.3	67.3
#50	71.6	45.5	30.3
#70	53.0	19.0	13.7
#100	26.2	11.0	9.7
#140	15.3	8.3	7.9
#170	13.3	7.8	7.4
#200	12.3	7.6	7.1

SOIL DESCRIPTION

○ Gray fine SAND, little medium sand, little silt, trace coarse sand, trace gravel.

□ Tan/gray fine SAND, some medium sand, trace silt, trace coarse sand, trace gravel.

△ Tan/gray fine SAND, some medium sand, trace silt, trace gravel, trace coarse sand.

REMARKS:

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○ Source: NJV497	Sample No.: S-5	Elev./Depth: 9.6'10.3'
□ Source: NJV497	Sample No.: S-6	Elev./Depth: 10.7'-14.5'
△ Source: NJV497	Sample No.: S-7	Elev./Depth: 14.5'-19.0'

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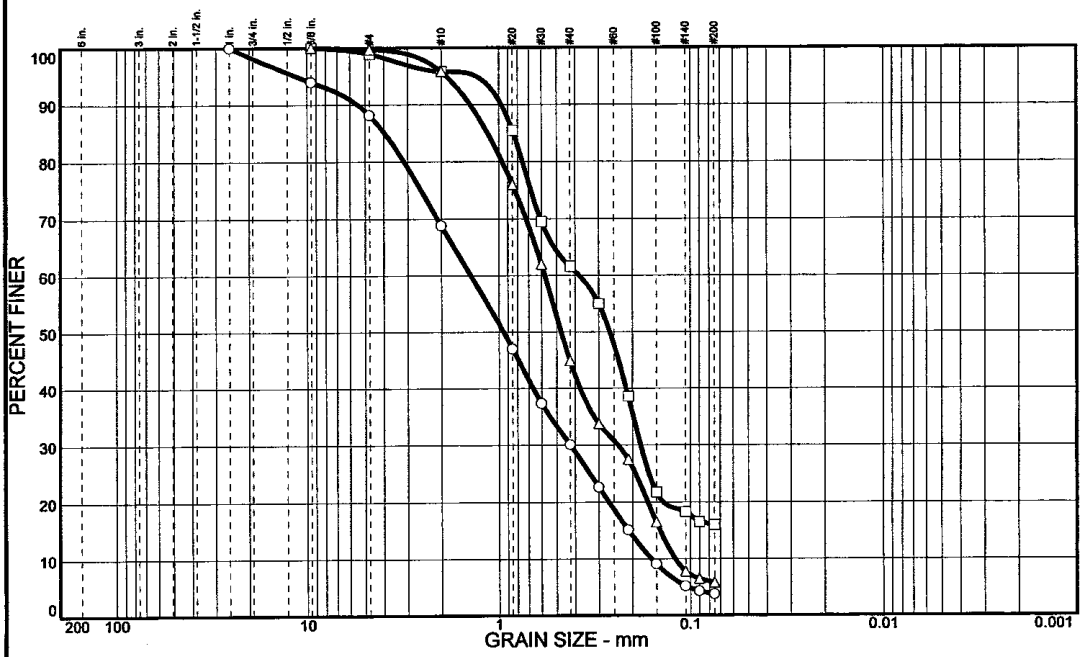
Client: U.S. Army Corps of Engineers

Project: Vibrocoring, New Jersey Coast, Lower Cape May Meadows PED, Contract # DACW-61-9-D-0008, Task Order #8.

Project No.: 3769.GI Date/chk'd by: June 1999/WHS

Particle Size Distribution Report NJV-498



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		11.8	84.4	3.8		SW			
□		1.1	82.9	16.0		SM			
△		0.3	93.9	5.8		SP-SM			

SIEVE inches size	PERCENT FINER ○	□	△
1	100.0		
3/8	94.0	100.0	100.0
	GRAIN SIZE		
D_{60}	1.40	0.380	0.576
D_{30}	0.423	0.181	0.238
D_{10}	0.159		0.120
	COEFFICIENTS		
C_c	0.80		0.82
C_u	8.82		4.81

SIEVE number size	PERCENT FINER ○	□	△
#4	88.2	98.9	99.7
#10	68.8	95.8	95.8
#20	47.0	85.5	76.0
#30	37.4	69.5	62.0
#40	30.1	61.6	44.9
#50	22.7	55.0	33.8
#70	15.1	38.6	27.5
#100	9.1	21.8	16.5
#140	5.2	18.3	7.8
#170	4.3	16.5	6.5
#200	3.8	16.0	5.8

SOIL DESCRIPTION

○ Gray/tan medium SAND, some fine sand, little coarse sand, little gravel, trace silt.

□ Dark-gray fine SAND, some medium sand, little silt, trace coarse sand, trace gravel.

△ Dark gray medium SAND and fine sand, trace silt, trace coarse sand.

REMARKS:

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○ Source: NJV498 Sample No.: S-1 Elev./Depth: 0.0'-1.3'
□ Source: NJV498 Sample No.: S-2 Elev./Depth: 1.3'-5.0'
△ Source: NJV498 Sample No.: S-3 Elev./Depth: 5.0'-6.2'

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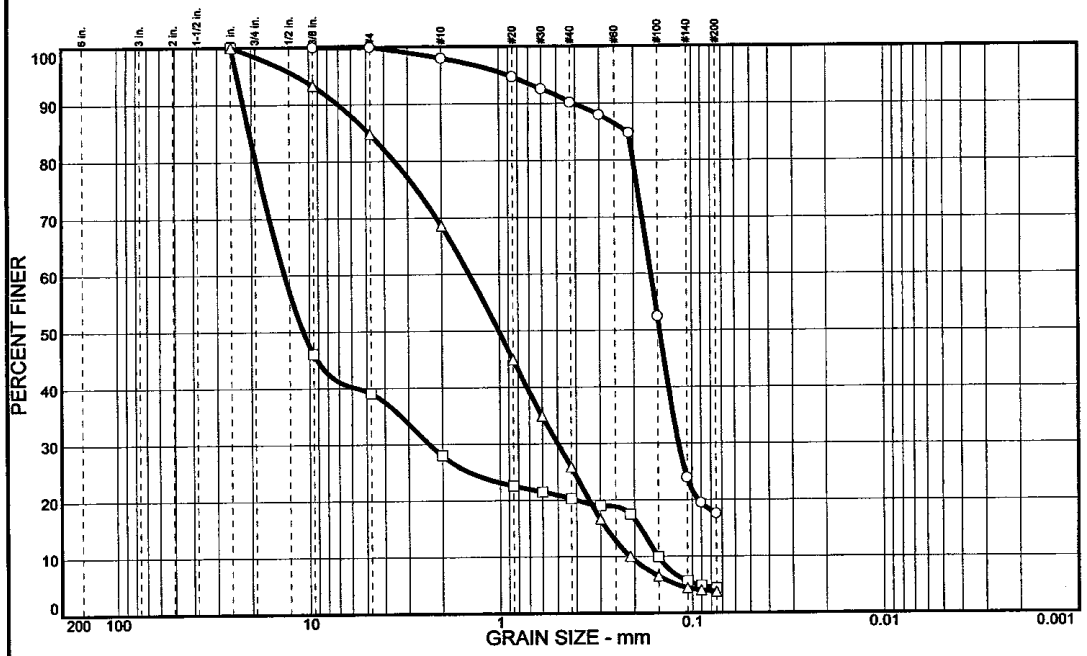
Project: Vibrocoring, New Jersey Coast, Lower Cape May Inlet PED, Contract #DACW-61-98-D-0008, Task Order #8.
Project No.: 3769.GI Date/chk'd by: June 1999/WHS

Particle Size Distribution Report NJV-498



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○			82.4	17.6		SM			
□		60.9	34.7	4.4		GW			
△		15.2	81.1	3.7		SW			

SIEVE inches size	PERCENT FINER ○	□	△
1		100.0	100.0
3/8	100.0	46.1	93.3
GRAIN SIZE			
D_{60}	0.162	13.5	1.43
D_{30}	0.117	2.33	0.497
D_{10}		0.151	0.210
COEFFICIENTS			
C_c		2.68	0.82
C_u		89.51	6.82

SIEVE number size	PERCENT FINER ○	□	△
#4	100.0	39.1	84.8
#10	98.0	28.0	68.6
#20	94.7	22.6	44.9
#30	92.6	21.5	34.9
#40	90.2	20.3	25.9
#50	88.0	19.0	16.6
#70	84.8	17.5	10.0
#100	52.5	9.9	6.5
#140	24.0	5.6	4.4
#170	19.5	4.8	4.0
#200	17.6	4.4	3.7

SOIL DESCRIPTION

○ Dark-gray fine SAND, little silt, trace medium sand, trace coarse sand.

□ Dark-gray GRAVEL, little fine sand, little coarse sand, trace medium sand, trace silt.

△ Dark-gray medium SAND, some fine sand, little coarse sand, little gravel, trace silt.

REMARKS:

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○ Source: NJV498	Sample No.: S-4	Elev./Depth: 6.2'-9.1'
□ Source: NJV498	Sample No.: S-5	Elev./Depth: 9.1'-10.0'
△ Source: NJV498	Sample No.: S-6	Elev./Depth: 10.0'-10.6'

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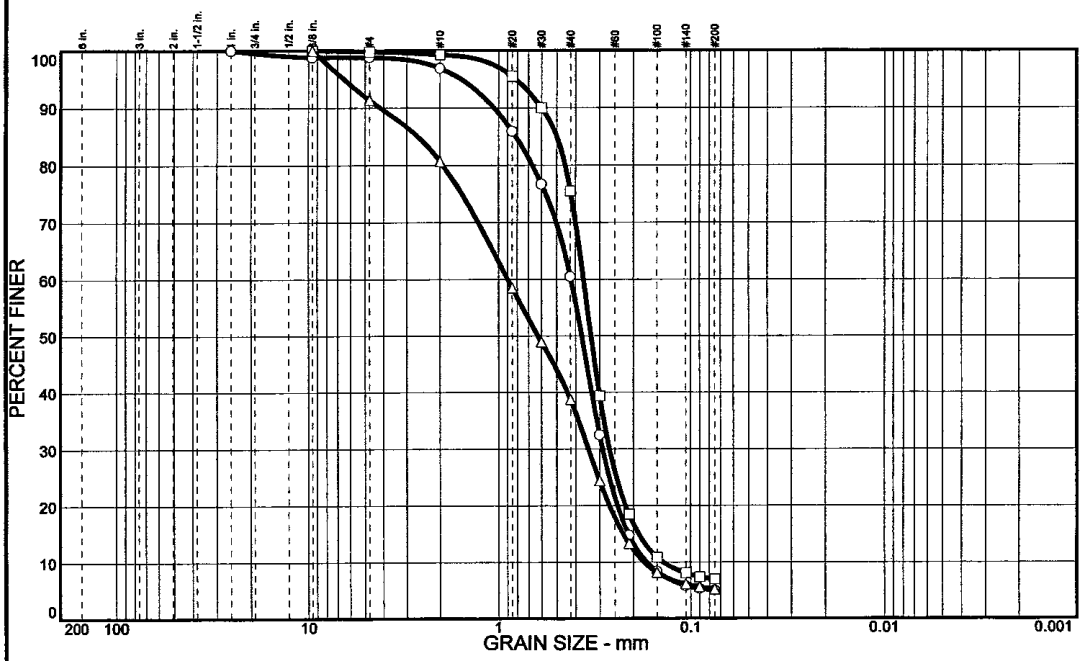
Project No.: 3769.GI Date/chk'd by: June 1999/WHS

Particle Size Distribution Report NJV-498



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		1.2	93.8	5.0		SP-SM			
□		0.2	92.8	7.0		SP-SM			
△		8.6	86.2	5.2		SP-SM			

SIEVE inches size	PERCENT FINER ○	□	△
1	100.0		
3/8	98.8	100.0	100.0
	GRAIN SIZE		
D_{60}	0.422	0.364	0.896
D_{30}	0.289	0.267	0.343
D_{10}	0.169	0.139	0.175
	COEFFICIENTS		
C_c	1.17	1.41	0.75
C_u	2.49	2.62	5.12

SIEVE number size	PERCENT FINER ○	□	△
#4	98.8	99.8	91.4
#10	96.9	99.3	80.7
#20	85.9	95.5	58.5
#30	76.7	90.0	48.9
#40	60.5	75.5	38.7
#50	32.5	39.4	24.4
#70	14.8	18.5	13.3
#100	8.4	10.9	8.2
#140	5.8	8.1	6.1
#170	5.3	7.4	5.6
#200	5.0	7.0	5.2

SOIL DESCRIPTION

○ Tan/gray fine SAND and medium SAND, trace silt, trace coarse sand, trace gravel.

□ Tan/gray fine SAND, some medium sand, trace silt, trace coarse sand.

△ Tan/gray medium SAND, some fine sand, little coarse sand, trace gravel, trace silt.

REMARKS:

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○ Source: NJV498 Sample No.: S-7 Elev./Depth: 10.6'-15.0'

□ Source: NJV498 Sample No.: S-8 Elev./Depth: 15.0'-17.8'

△ Source: NJV498 Sample No.: S-9 Elev./Depth: 17.8'-18.5

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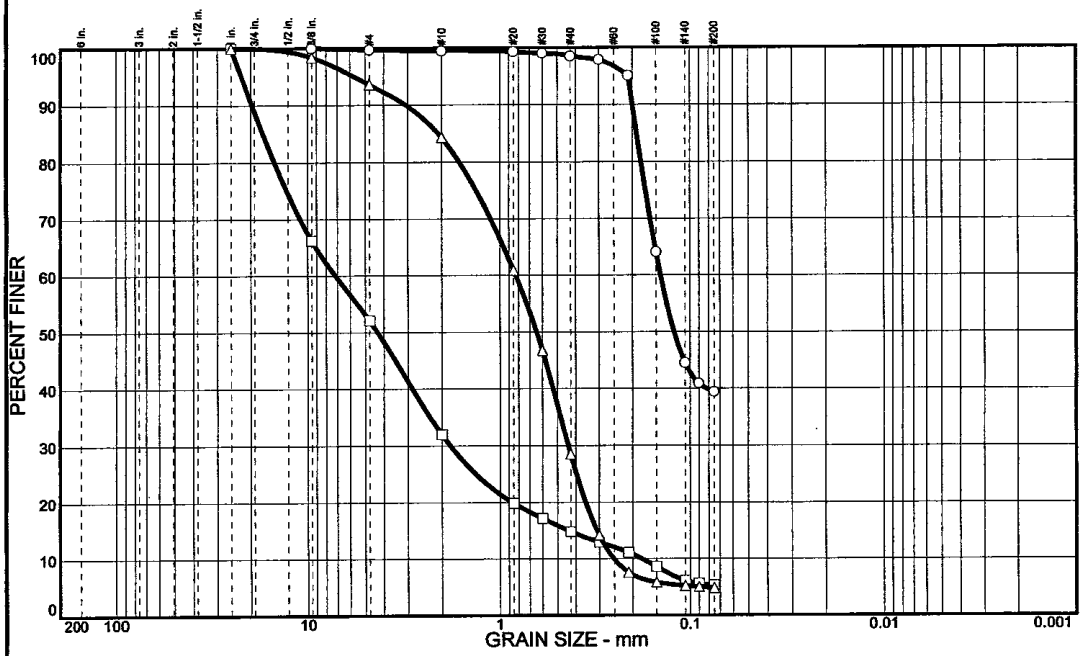
Project No.: 3769.GI Date/chk'd by: June 1999/WHS

Particle Size Distribution Report NJV-499



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		0.3	60.3	39.4		SM			
□		47.9	46.8	5.3		GW-GM			
△		6.4	88.8	4.8		SP			

SIEVE inches size	PERCENT FINER ○	□	△
1		100.0	100.0
3/8	100.0	66.2	98.4
GRAIN SIZE			
D_{60}	0.142	7.16	0.829
D_{30}		1.81	0.438
D_{10}		0.179	0.251
COEFFICIENTS			
C_c		2.55	0.92
C_u		40.06	3.31

SIEVE number size	PERCENT FINER ○	□	△
#4	99.7	52.1	93.6
#10	99.5	32.0	84.3
#20	99.3	19.9	60.9
#30	99.0	17.2	46.7
#40	98.5	14.8	28.5
#50	97.9	12.9	14.2
#70	95.1	11.1	7.6
#100	64.1	8.6	5.8
#140	44.5	6.1	5.2
#170	40.9	5.6	5.0
#200	39.4	5.3	4.8

SOIL DESCRIPTION

○ Gray fine SAND and silt, trace medium sand.

□ Gray GRAVEL, little, coarse sand, little medium sand, trace fine sand, trace silt.

△ Tan medium SAND, some fine sand, trace coarse sand, trace gravel, trace silt.

REMARKS:

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○ Source: NJV499	Sample No.: S-1	Elev./Depth: 0.0'-3.7'
□ Source: NJV499	Sample No.: S-2	Elev./Depth: 4.0'-5.5'
△ Source: NJV499	Sample No.: S-3	Elev./Depth: 5.5'-8.9'

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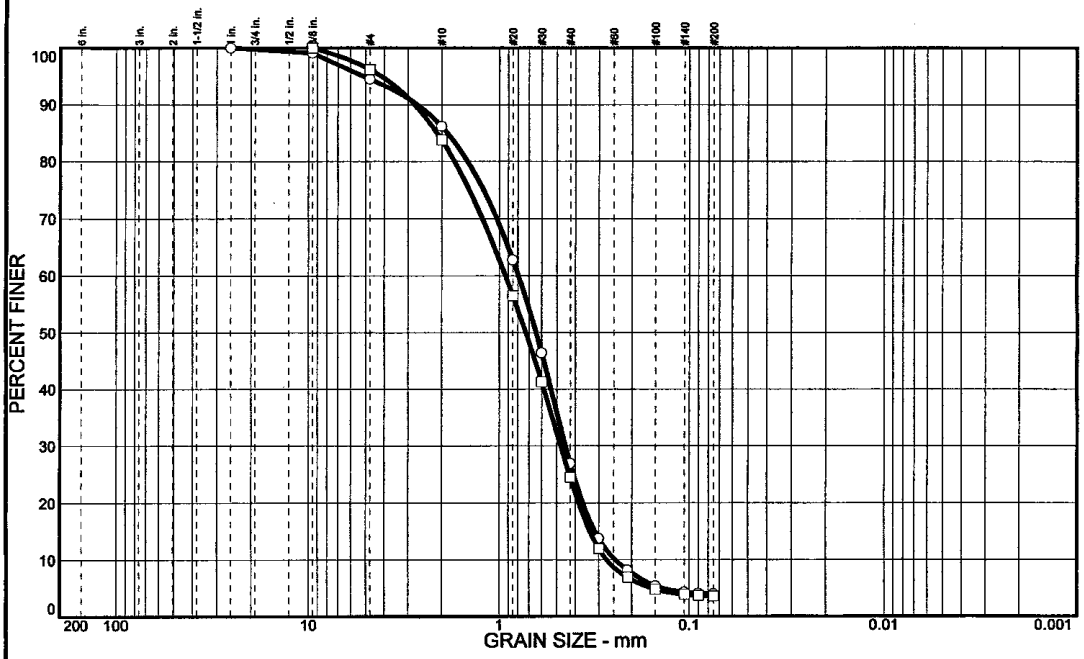
Project No.: 3769.GI Date/chk'd by: June 1999/WHS

Particle Size Distribution Report NJV-499



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		5.5	90.5	4.0		SP			
□		3.8	92.6	3.6		SP			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □
1	100.0	
3/8	99.1	100.0
GRAIN SIZE		
D_{60}	0.794	0.929
D_{30}	0.451	0.477
D_{10}	0.245	0.273
COEFFICIENTS		
C_c	1.04	0.90
C_u	3.25	3.41

SIEVE number size	PERCENT FINER ○	PERCENT FINER □
#4	94.5	96.2
#10	86.2	83.8
#20	62.8	56.5
#30	46.4	41.3
#40	26.9	24.5
#50	13.8	12.0
#70	8.2	6.9
#100	5.4	4.8
#140	4.3	3.9
#170	4.1	3.7
#200	4.0	3.6

SOIL DESCRIPTION

○ Tan medium SAND, some fine sand, trace coarse sand, trace gravel, trace silt.

□ Tan medium SAND, some fine sand, little coarse sand, trace gravel, trace silt.

REMARKS:

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○ Source: NJV499 Sample No.: S-4 Elev./Depth: 8.9'-14.2'

□ Source: NJV499 Sample No.: S-5 Elev./Depth: 14.2'-19.3'

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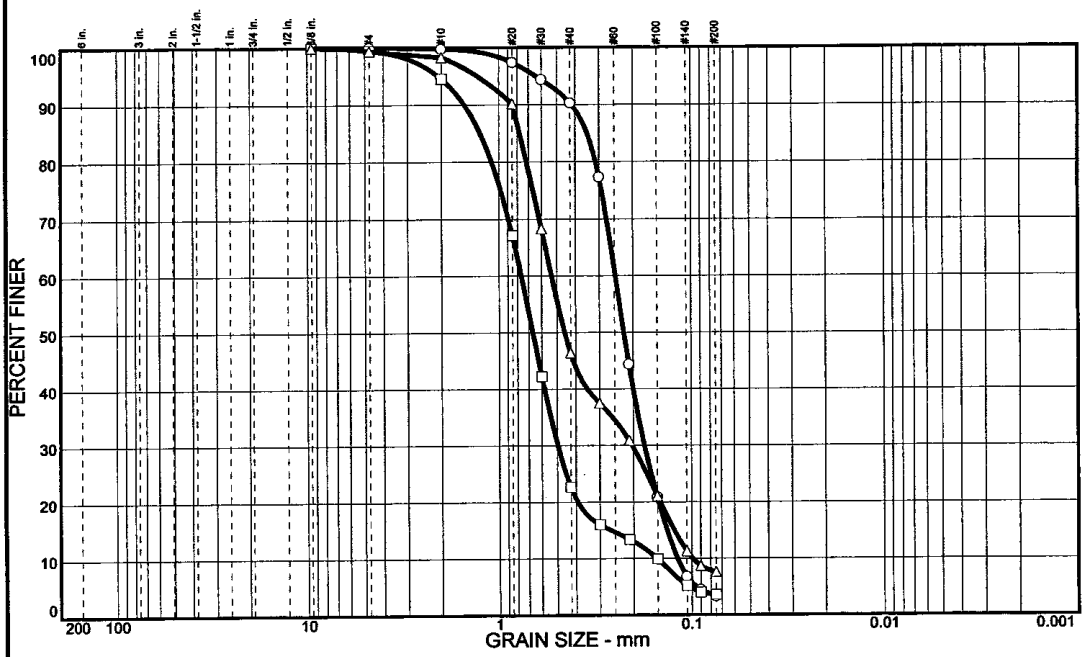
Project: Vibrocoring, New Jersey Coast, Lower Cape May Meadows PED, Contract # DACW-61-9-D-0008, Task Order #8.

Project No.: 3769.GI Date/chk'd by: June 1999/WHS

Particle Size Distribution Report NJV-500



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○			96.7	3.3		SP			
□		0.5	95.9	3.6		SP			
△		0.6	91.8	7.6		SP-SM			

SIEVE inches size	PERCENT FINER ○	□	△
3/8	100.0	100.0	100.0
GRAIN SIZE			
D_{60}	0.247	0.765	0.533
D_{30}	0.174	0.496	0.203
D_{10}	0.118	0.151	0.0990
COEFFICIENTS			
C_c	1.04	2.13	0.78
C_u	2.08	5.06	5.38

SIEVE number size	PERCENT FINER ○	□	△
#4	100.0	99.5	99.4
#10	99.8	94.6	98.3
#20	97.4	67.1	90.2
#30	94.4	42.3	68.3
#40	90.3	22.7	46.4
#50	77.3	16.0	37.5
#70	44.4	13.4	30.9
#100	20.9	9.9	21.1
#140	6.8	5.2	11.3
#170	4.5	4.0	8.7
#200	3.3	3.6	7.6

SOIL DESCRIPTION

○ Tan fine SAND, trace medium sand, trace silt.

□ Gray medium SAND, little fine sand, trace coarse sand, trace silt, trace gravel.

△ Gray medium SAND and fine sand, trace silt, trace coarse sand, trace gravel.

REMARKS:

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○ Source: NJV500 — Sample No.: S-1 — Elev./Depth: 0.0'-0.6'

□ Source: NJV500 — Sample No.: S-2 — Elev./Depth: 0.6'-4.8'

△ Source: NJV500 — Sample No.: S-3 — Elev./Depth: 4.8'-5.9'

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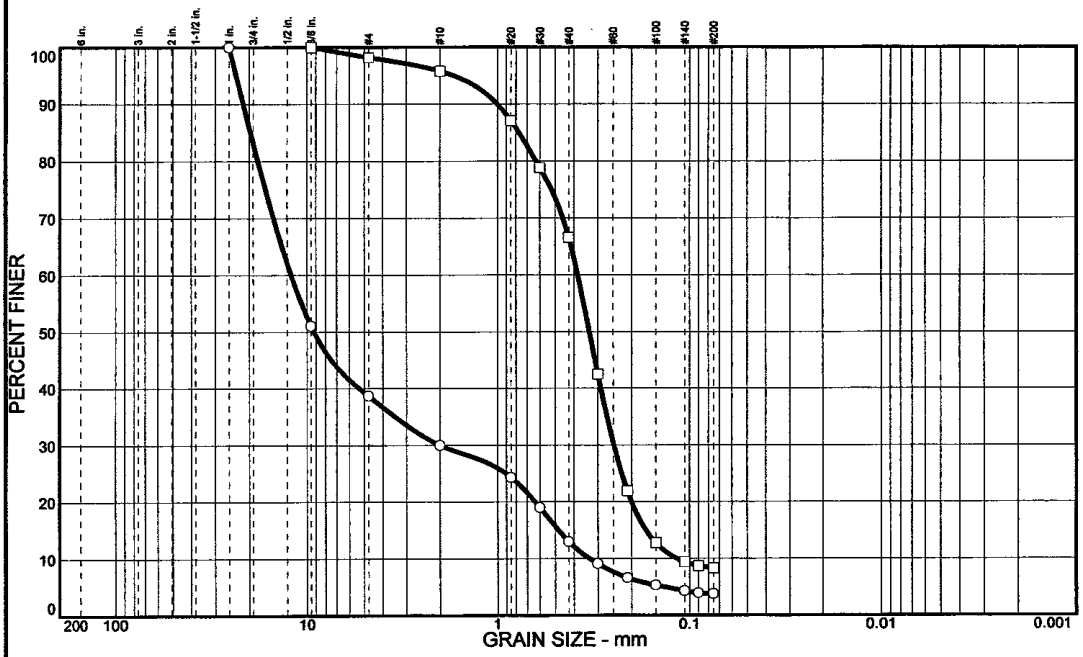
Project No.: 3769.GI — Date/chk'd by: June 1999/WHS

Particle Size Distribution Report NJV-500



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		61.3	34.9	3.8		GW			
□		1.8	89.9	8.3		SP-SM			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □
1	100.0	
3/8	51.1	100.0
GRAIN SIZE		
D_{60}	12.1	0.382
D_{30}	2.00	0.247
D_{10}	0.331	0.117
COEFFICIENTS		
C_c	1.00	1.37
C_u	36.52	3.27

SIEVE number size	PERCENT FINER ○	PERCENT FINER □
#4	38.7	98.2
#10	30.0	95.8
#20	24.3	87.1
#30	19.0	78.8
#40	13.0	66.6
#50	9.1	42.5
#70	6.6	21.9
#100	5.3	12.8
#140	4.3	9.4
#170	3.9	8.7
#200	3.8	8.3

SOIL DESCRIPTION

○ Gray GRAVEL, little medium sand, trace fine sand, trace coarse sand, trace silt.

□ Gray/tan fine SAND, some medium sand, trace silt, trace coarse sand, trace gravel.

REMARKS:

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○ Source: NJV500 Sample No.: S-4 Elev./Depth: 5.9'-6.9'

□ Source: NJV500 Sample No.: S-5 Elev./Depth: 6.9'-9.7'

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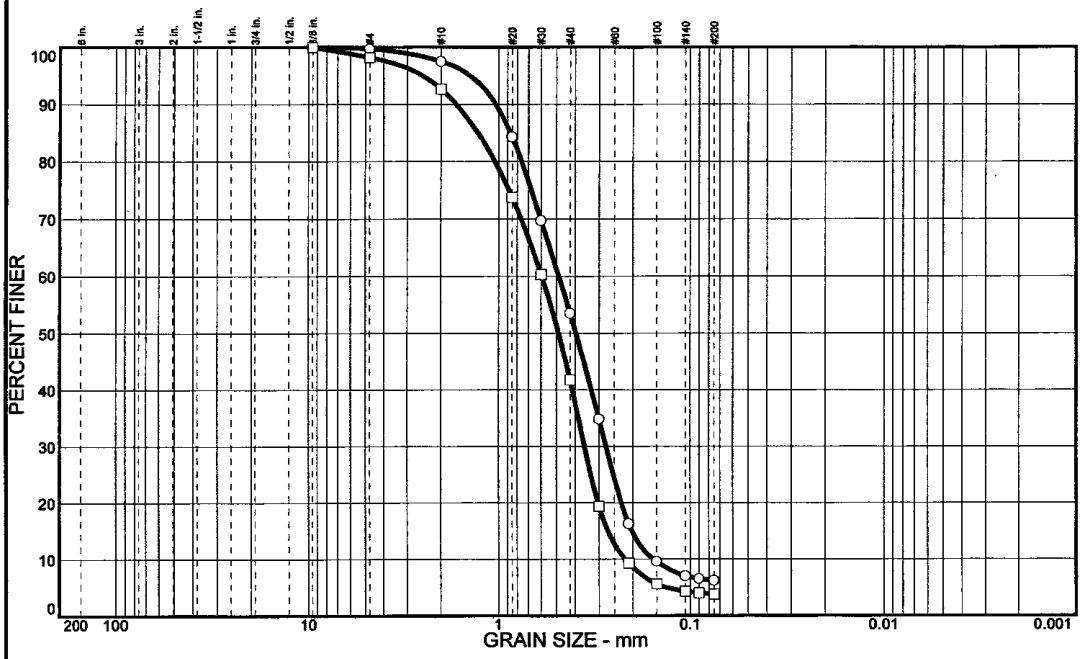
Particle Size Distribution Report NJV-500



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		0.3	93.5	6.2		SP-SM			
□		1.8	94.4	3.8		SP			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □	
3/8	100.0	100.0	
	GRAIN SIZE		
D_{60}	0.486	0.596	
D_{30}	0.276	0.357	
D_{10}	0.156	0.219	
	COEFFICIENTS		
C_c	1.01	0.98	
C_u	3.12	2.72	

SIEVE number size	PERCENT FINER ○	PERCENT FINER □	
#4	99.7	98.2	
#10	97.5	92.7	
#20	84.3	73.7	
#30	69.7	60.3	
#40	53.5	41.8	
#50	34.8	19.4	
#70	16.3	9.3	
#100	9.6	5.6	
#140	7.0	4.3	
#170	6.5	4.0	
#200	6.2	3.8	

SOIL DESCRIPTION

○ Gray/tan fine SAND and medium sand, trace silt, trace coarse sand.

□ Gray/tan medium SAND and fine sand, trace coarse sand, trace silt,trace gravel.

REMARKS:

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○ Source: NJV500 Sample No.: S-6 Elev./Depth: 9.7'-15.0'

□ Source: NJV500 Sample No.: S-7 Elev./Depth: 15.0'-20.0'

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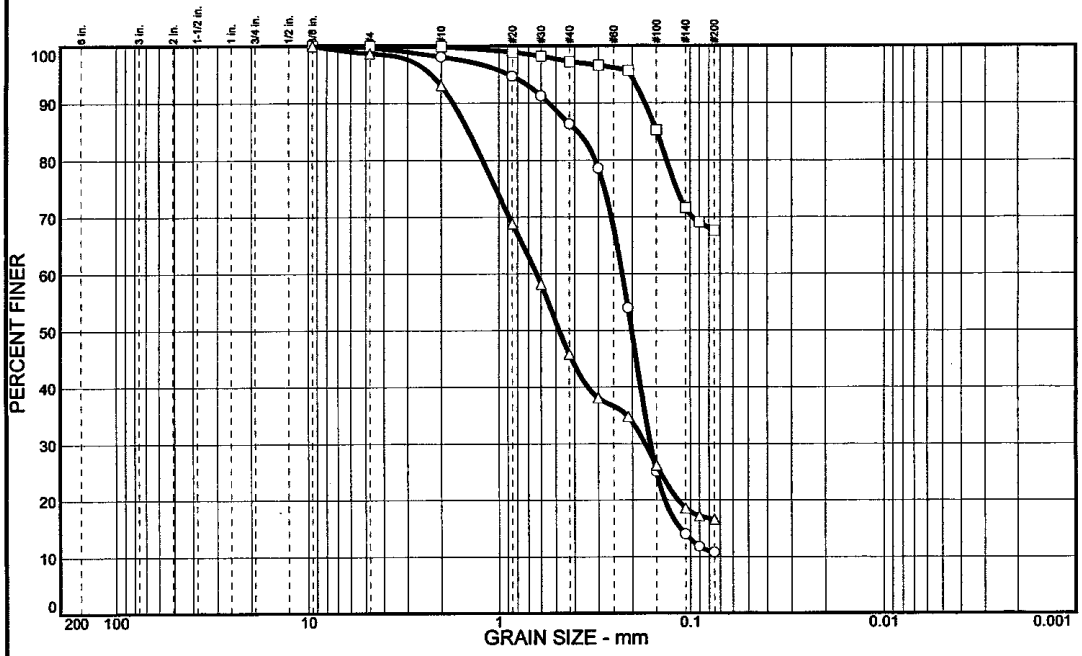
Project No.: 3769.GI Date/chk'd by: June 1999/WHS

Particle Size Distribution Report NJV-501



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		0.3	88.9	10.8		SP-SM			
□			32.4	67.6		ML			
△		1.3	82.1	16.6		SM			

SIEVE inches size	PERCENT FINER ○	□	△
3/8	100.0	100.0	100.0
GRAIN SIZE			
D_{60}	0.225		0.633
D_{30}	0.161		0.171
D_{10}			
COEFFICIENTS			
C_c			
C_u			

SIEVE number size	PERCENT FINER ○	□	△
#4	99.7	100.0	98.7
#10	98.1	99.9	93.1
#20	94.7	98.9	68.8
#30	91.3	98.2	58.2
#40	86.4	97.2	45.8
#50	78.6	96.6	38.1
#70	54.0	95.7	34.8
#100	25.1	85.3	26.2
#140	14.0	71.6	18.6
#170	11.8	69.1	17.2
#200	10.8	67.6	16.6

SOIL DESCRIPTION

○ Gray fine SAND, little medium sand, little silt, trace coarse sand.

□ Gray SILT, some fine sand, trace medium sand.

△ Gray medium SAND, some fine sand, little silt, trace coarse sand, trace gravel.

REMARKS:

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○ Source: NJV501	Sample No.: S-1	Elev./Depth: 0.0'-5.0'
□ Source: NJV501	Sample No.: S-2	Elev./Depth: 5.0'-6.0'
△ Source: NJV501	Sample No.: S-3	Elev./Depth: 6.0'-9.9'

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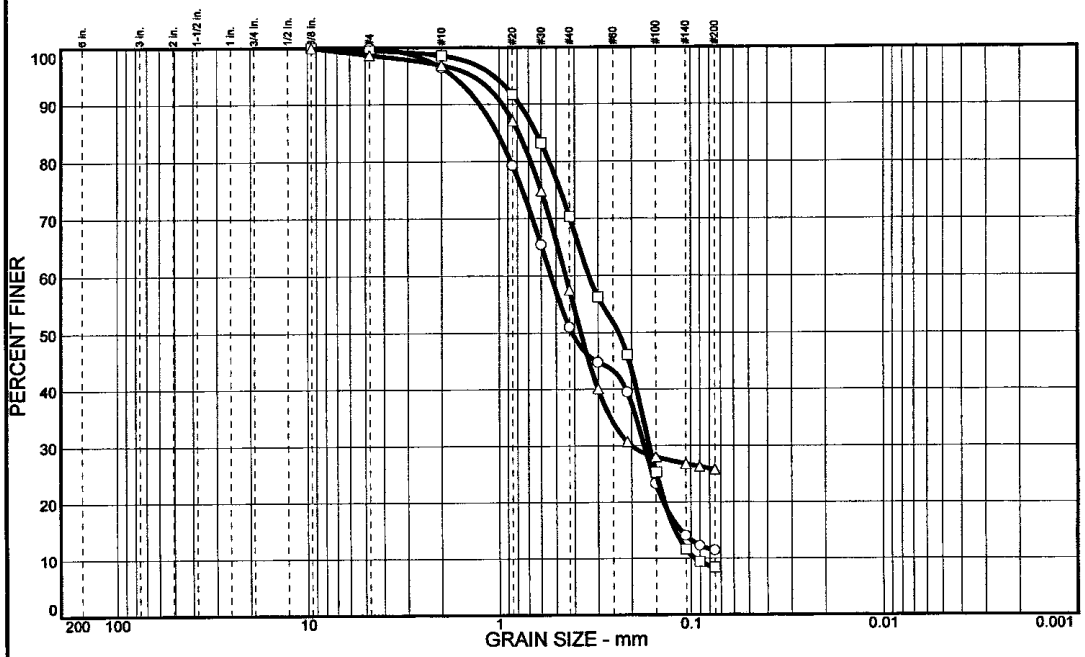
Project No.: 3769.GI Date/chk'd by: June 1999/WHS

Particle Size Distribution Report NJV-501



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		0.1	88.4	11.5		SP-SM			
□		0.5	91.1	8.4		SP-SM			
△		1.3	72.9	25.8		SM			

SIEVE inches size	PERCENT FINER ○	□	△
3/8	100.0	100.0	100.0
GRAIN SIZE			
D_{60}	0.533	0.334	0.445
D_{30}	0.172	0.162	0.199
D_{10}		0.0957	
COEFFICIENTS			
C_c		0.82	
C_u		3.49	

SIEVE number size	PERCENT FINER ○	□	△
#4	99.9	99.5	98.7
#10	96.5	98.6	96.9
#20	79.3	91.7	87.1
#30	65.4	83.2	74.8
#40	51.0	70.3	57.5
#50	44.8	56.3	40.1
#70	39.5	46.1	30.7
#100	23.3	25.3	28.0
#140	14.1	11.6	26.8
#170	12.3	9.4	26.3
#200	11.5	8.4	25.8

SOIL DESCRIPTION

○ Gray medium SAND and fine sand, little silt, trace coarse sand.

□ Gray fine SAND, some medium sand, trace silt, trace coarse sand, trace gravel.

△ Gray medium SAND, some fine sand, some silt, trace coarse sand, trace gravel.

REMARKS:

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△

○ Source: NJV501	Sample No.: S-4	Elev./Depth: 9.9'-15.0'
□ Source: NJV501	Sample No.: S-5	Elev./Depth: 15.0'-19.1'
△ Source: NJV501	Sample No.: S-6	Elev./Depth: 19.1'-20.0'

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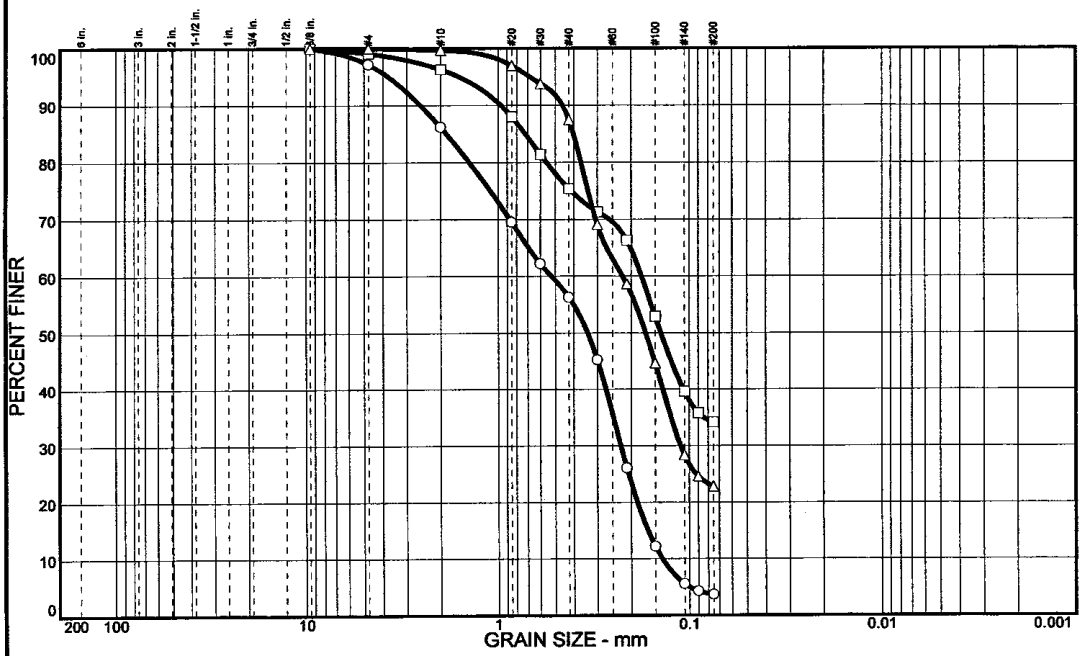
Project: Vibrocoring, New Jersey Coast, Lower Cape May Inlet PED, Contract #DACW-61-98-D-0008, Task Order #8.

Project No.: 3769.GI Date/chk'd by: June 1999/WHS

Particle Size Distribution Report NJV-502



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		2.8	93.5	3.7		SP			
□		0.9	64.9	34.2		SM			
△			77.2	22.8		SM			

SIEVE inches size	PERCENT FINER ○	□	△
3/8	100.0	100.0	100.0
	GRAIN SIZE		
D_{60}	0.525	0.176	0.221
D_{30}	0.226		0.111
D_{10}	0.138		
	COEFFICIENTS		
C_c	0.70		
C_u	3.80		

SIEVE number size	PERCENT FINER ○	□	△
#4	97.2	99.1	100.0
#10	86.2	96.3	99.7
#20	69.5	88.0	97.0
#30	62.2	81.4	93.8
#40	56.3	75.4	87.5
#50	45.2	71.3	69.1
#70	26.1	66.3	58.6
#100	12.2	52.9	44.6
#140	5.6	39.6	28.4
#170	4.3	35.8	24.6
#200	3.7	34.2	22.8

SOIL DESCRIPTION

○ Gray fine SAND, some medium sand, little coarse sand, trace silt, trace gravel.

□ Gray fine SAND, some silt, some medium sand, trace coarse sand, trace gravel.

△ Gray fine SAND, some silt, little medium sand.

REMARKS:

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○ Source: NJV502	Sample No.: S-1	Elev./Depth: 0.0'-3.4'
□ Source: NJV502	Sample No.: S-2	Elev./Depth: 3.4'-5.0'
△ Source: NJV502	Sample No.: S-3	Elev./Depth: 5.0'-7.6'

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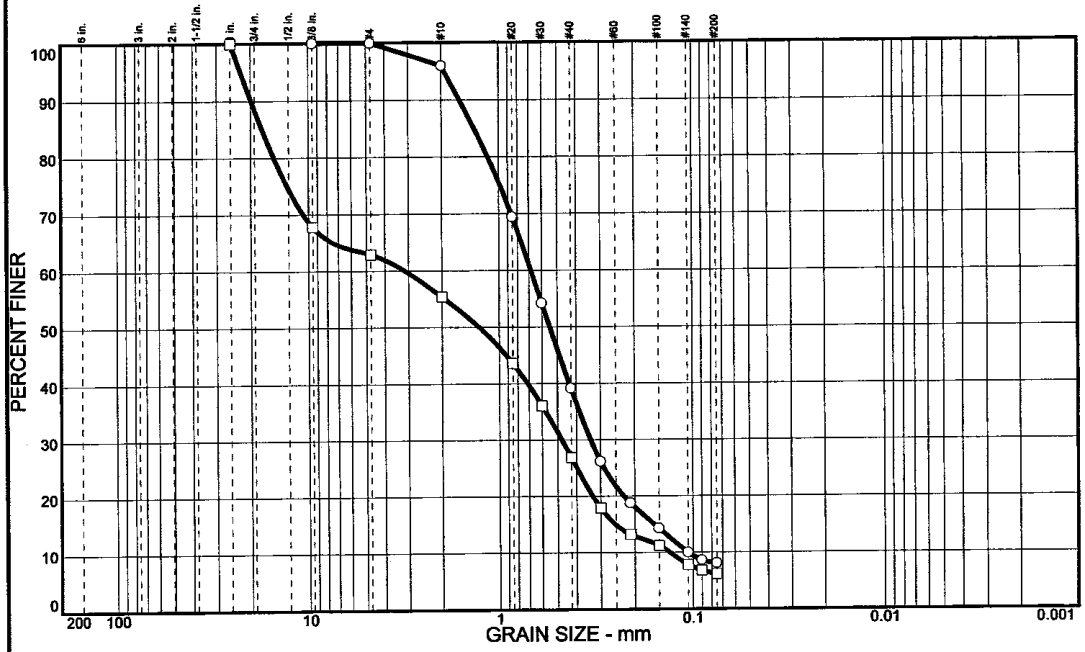
Particle Size Distribution Report NJV-502



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○			91.9	8.1		SW-SM			
□		37.1	56.7	6.2		SW-SM			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □
1		100.0
3/8	100.0	67.8
GRAIN SIZE		
D_{60}	0.683	3.13
D_{30}	0.337	0.475
D_{10}	0.106	0.132
COEFFICIENTS		
C_c	1.57	0.55
C_u	6.44	23.72

SIEVE number size	PERCENT FINER ○	PERCENT FINER □
#4	100.0	62.9
#10	96.0	55.4
#20	69.4	43.6
#30	54.2	36.1
#40	39.2	26.9
#50	26.2	17.9
#70	18.8	13.2
#100	14.3	11.2
#140	10.0	7.8
#170	8.6	6.8
#200	8.1	6.2

SOIL DESCRIPTION

○ Gray medium SAND, some fine sand, trace silt, trace coarse sand.

□ Gray medium to fine SAND and gravel, trace coarse sand, trace silt.

REMARKS:

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○ Source: NJV502 Sample No.: S-4 Elev./Depth: 7.6'-9.8'

□ Source: NJV502 Sample No.: S-5 Elev./Depth: 9.8'-11.0'

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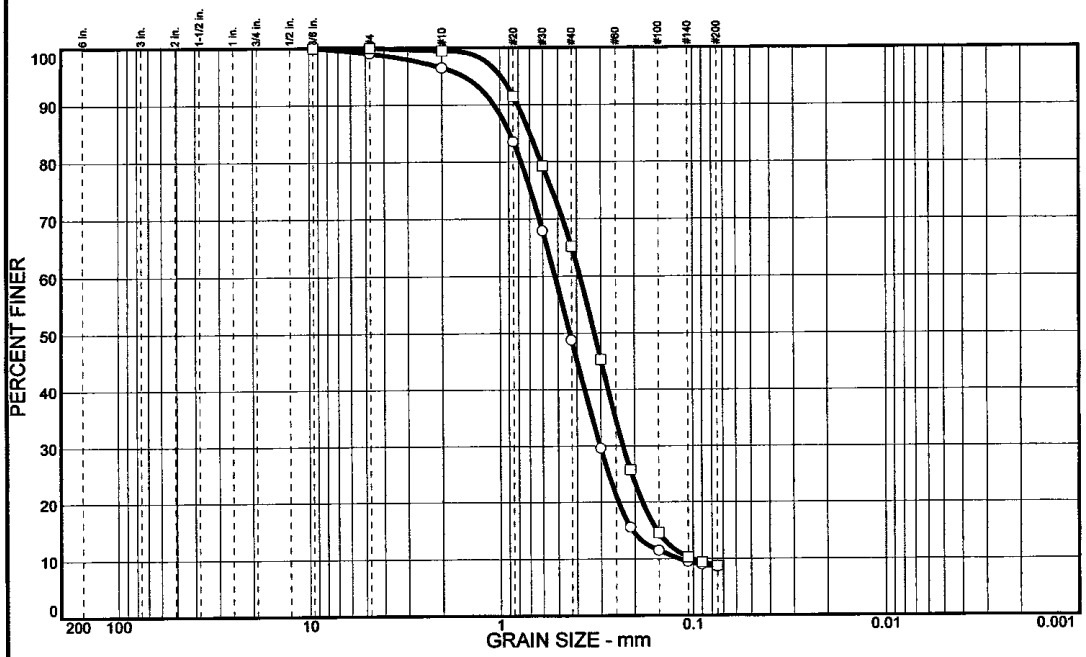
Particle Size Distribution Report NJV-502



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		1.0	90.4	8.6		SP-SM			
□			91.2	8.8		SP-SM			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □
3/8	100.0	100.0
GRAIN SIZE		
D_{60}	0.518	0.385
D_{30}	0.302	0.229
D_{10}	0.118	0.101
COEFFICIENTS		
C_c	1.50	1.35
C_u	4.40	3.80

SIEVE number size	PERCENT FINER ○	PERCENT FINER □
#4	99.0	100.0
#10	96.5	99.5
#20	83.5	91.5
#30	67.9	79.3
#40	48.8	65.2
#50	29.6	45.4
#70	15.6	25.8
#100	11.5	14.6
#140	9.5	10.3
#170	9.0	9.4
#200	8.6	8.8

SOIL DESCRIPTION

○ Gray/tan medium SAND and fine sand, trace silt, trace coarse sand, trace gravel.

□ Gray/tan fine SAND, some medium sand, trace silt, trace coarse sand.

REMARKS:

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□

○ Source: NJV502 Sample No.: S-6 Elev./Depth: 11.0'-15.0'

□ Source: NJV502 Sample No.: S-7 Elev./Depth: 15.0'-17.0'

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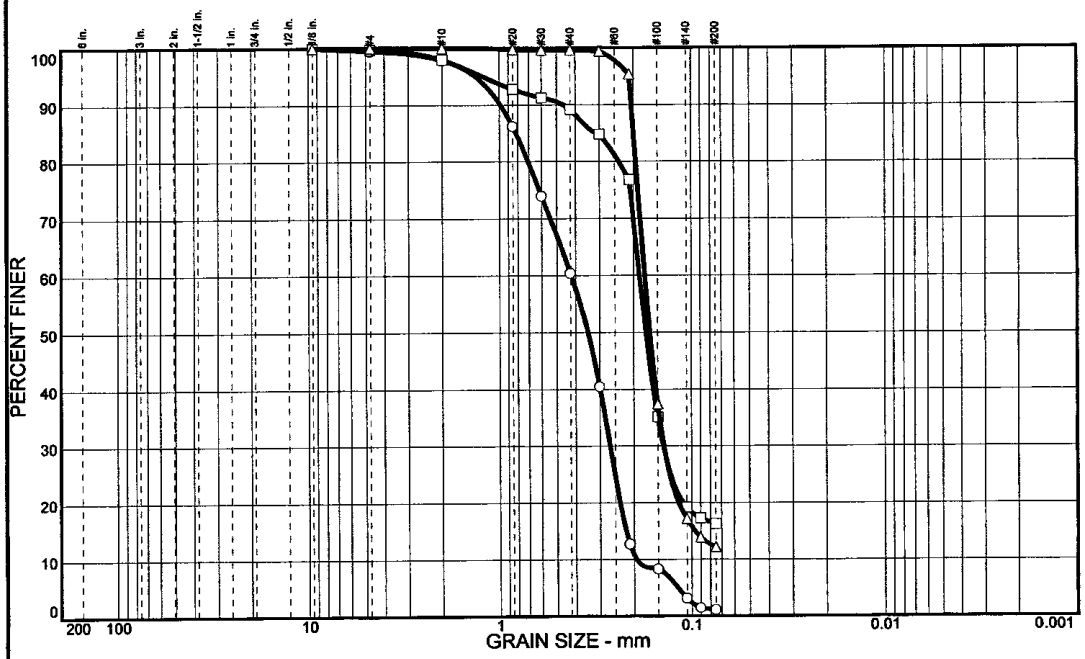
Particle Size Distribution Report NJV-503



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		0.5	98.4	1.1		SP			
□		0.2	83.5	16.3		SM			
△			87.8	12.2		SP-SM			

SIEVE inches size	PERCENT FINER ○	□	△
3/8	100.0	100.0	100.0
GRAIN SIZE			
D_{60}	0.421	0.186	0.174
D_{30}	0.265	0.141	0.139
D_{10}	0.194		
COEFFICIENTS			
C_c	0.86		
C_u	2.17		

SIEVE number size	PERCENT FINER ○	□	△
#4	99.5	99.8	100.0
#10	97.9	98.0	100.0
#20	86.2	92.8	99.7
#30	73.9	91.3	99.6
#40	60.4	89.2	99.6
#50	40.5	84.8	99.4
#70	12.7	76.8	95.4
#100	8.3	35.1	37.4
#140	3.1	19.2	17.2
#170	1.4	17.3	13.9
#200	1.1	16.3	12.2

SOIL DESCRIPTION

○ Gray fine SAND and medium sand, trace coarse sand, trace silt, trace gravel.

□ Gray fine SAND, little silt, trace medium sand, trace coarse sand.

△ Gray/tan fine SAND, little silt.

REMARKS:

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○ Source: NJV503 Sample No.: S-1 Elev./Depth: 0.0'-2.6'
□ Source: NJV503 Sample No.: S-2 Elev./Depth: 2.6'-4.7'
△ Source: NJV503 Sample No.: S-3 Elev./Depth: 4.7'-9.7'

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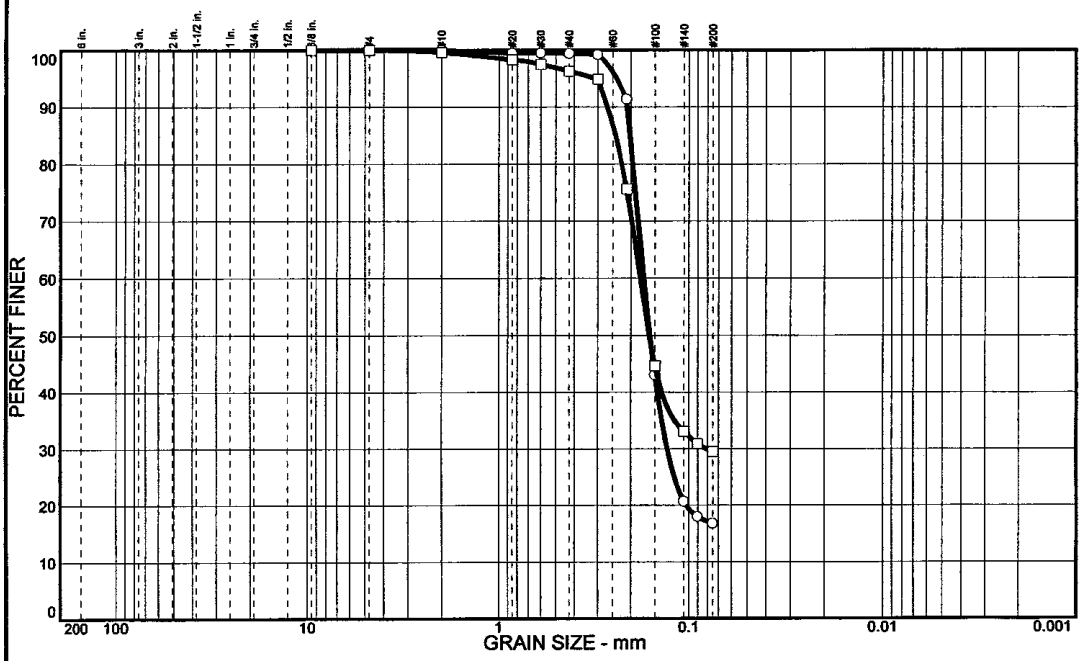
Particle Size Distribution Report NJV-503



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○			83.2	16.8		SM			
□			70.5	29.5		SM			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □
3/8	100.0	100.0
GRAIN SIZE		
D_{60}	0.171	0.178
D_{30}	0.130	0.0810
D_{10}		
COEFFICIENTS		
C_c		
C_u		

SIEVE number size	PERCENT FINER ○	PERCENT FINER □
#4	100.0	100.0
#10	100.0	99.6
#20	99.5	98.3
#30	99.5	97.5
#40	99.4	96.3
#50	99.2	94.9
#70	91.4	75.6
#100	43.1	44.7
#140	20.7	33.1
#170	18.0	30.9
#200	16.8	29.5

SOIL DESCRIPTION

○ Gray/tan fine SAND, little silt, trace medium sand.

□ Gray/tan fine SAND, some silt, trace medium sand.

REMARKS:

○

□

○ Source: NJV503 Sample No.: S-4 Elev./Depth: 9.7'-14.5'

□ Source: NJV503 Sample No.: S-5 Elev./Depth: 14.5'-16.8'

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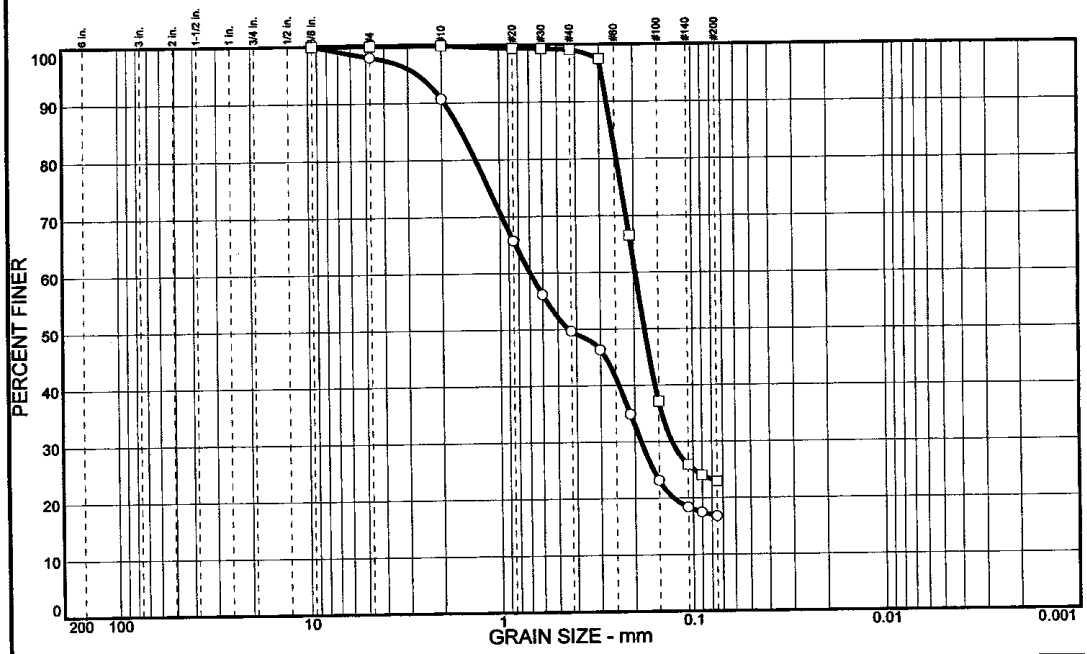
Particle Size Distribution Report NJV-503



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		2.0	81.2	16.8		SM			
□			77.0	23.0		SM			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □
3/8	100.0	100.0
GRAIN SIZE		
D_{60}	0.696	0.196
D_{30}	0.185	0.128
D_{10}		
COEFFICIENTS		
C_c		
C_u		

SIEVE number size	PERCENT FINER ○	PERCENT FINER □
#4	98.0	100.0
#10	90.7	100.0
#20	65.7	99.4
#30	56.2	99.3
#40	49.7	99.1
#50	46.3	97.5
#70	34.9	66.5
#100	23.2	37.2
#140	18.4	26.0
#170	17.5	24.1
#200	16.8	23.0

SOIL DESCRIPTION

○ Gray medium SAND, some fine sand, little silt, trace coarse sand, trace gravel.

□ Gray fine SAND, some silt, trace medium sand.

REMARKS:

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□

○ Source: NJV503 Sample No.: S-6 Elev./Depth: 16.8'-18.1'

□ Source: NJV503 Sample No.: S-7 Elev./Depth: 18.1'-19.5'

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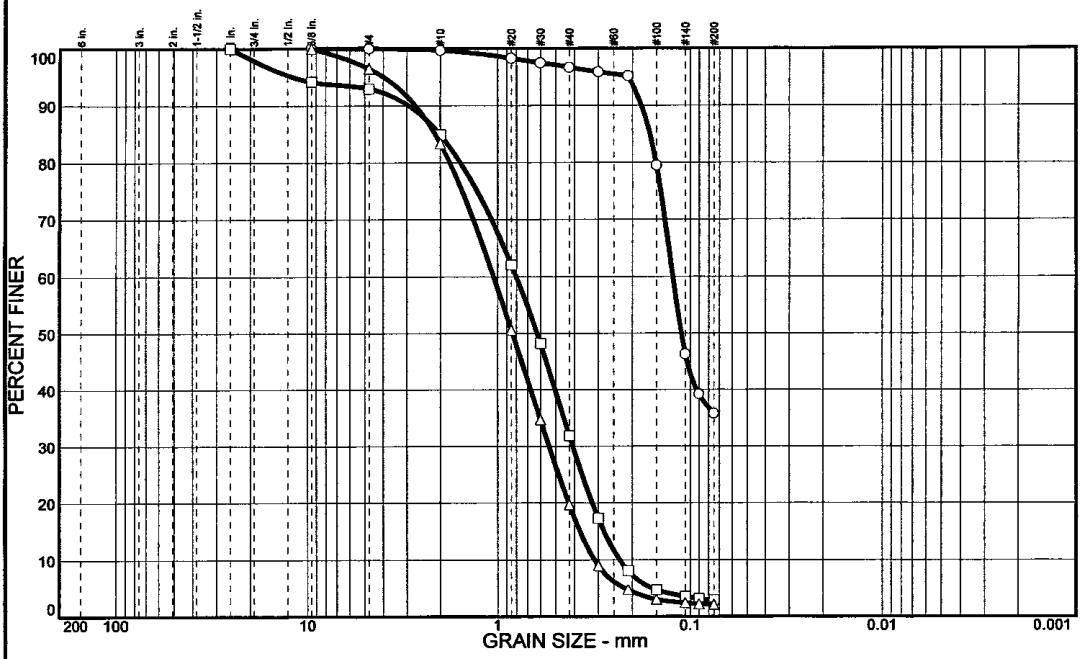
Particle Size Distribution Report NJV-504



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○			64.2	35.8		SM			
□		7.0	90.1	2.9		SP			
△		3.5	94.4	2.1		SP			

SIEVE inches size	PERCENT FINER ○	□	△
1		100.0	
3/8	100.0	94.2	100.0
GRAIN SIZE			
D_{60}	0.123	0.802	1.05
D_{30}		0.408	0.541
D_{10}		0.232	0.314
COEFFICIENTS			
C_c		0.90	0.89
C_u		3.46	3.35

SIEVE number size	PERCENT FINER ○	□	△
#4	100.0	93.0	96.5
#10	99.7	84.9	83.4
#20	98.3	62.1	50.6
#30	97.5	48.2	34.7
#40	96.7	31.9	19.7
#50	95.9	17.3	9.0
#70	95.2	8.1	4.7
#100	79.5	4.7	3.0
#140	46.3	3.5	2.4
#170	39.2	3.1	2.2
#200	35.8	2.9	2.1

SOIL DESCRIPTION

○ Dark gray fine SAND and silt, trace medium sand.

□ Light green medium SAND, some fine sand, trace coarse sand, trace gravel, trace silt.

△ Light green medium SAND, little fine sand, little coarse sand, trace gravel, trace silt.

REMARKS:

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○ Source: NJV504 Sample No.: S-1 Elev./Depth: 0.4'-4.6'
□ Source: NJV504 Sample No.: S-5 Elev./Depth: 14.2'-14.8'
△ Source: NJV504 Sample No.: S-6 Elev./Depth: 14.8'-15.6'

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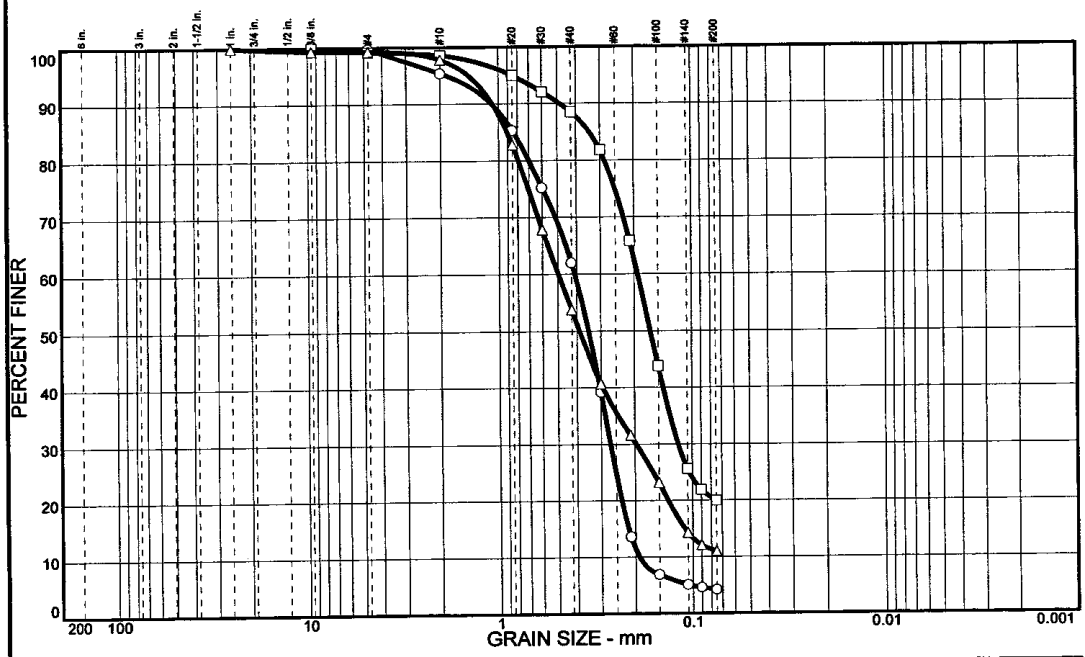

	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		0.3	95.5	4.2		SP			
□		0.8	79.2	20.0		SM			
△		0.7	88.3	11.0		SP-SM			

SIEVE inches size	PERCENT FINER ○	□	△
1			100.0
3/8	100.0	100.0	99.4
	GRAIN SIZE		
D_{60}	0.409	0.191	0.497
D_{30}	0.268	0.118	0.196
D_{10}	0.190		
	COEFFICIENTS		
C_c	0.92		
C_u	2.15		

SIEVE number size	PERCENT FINER ○	□	△
#4	99.7	99.2	99.3
#10	95.4	98.6	97.8
#20	85.3	95.0	82.8
#30	75.2	92.1	67.8
#40	62.0	88.5	53.8
#50	39.2	81.8	40.7
#70	13.6	65.8	31.6
#100	6.9	43.8	23.2
#140	5.1	25.6	14.3
#170	4.6	21.9	12.1
#200	4.2	20.0	11.0

SOIL DESCRIPTION

○ Brown fine SAND, some medium sand, trace coarse sand, trace silt.

□ Gray fine SAND, little silt, trace medium sand, trace gravel, trace coarse sand.

△ Gray/tan medium SAND and fine sand, little silt, trace coarse sand, trace gravel.

REMARKS:

○

□

△

○ Source: NJV505 Sample No.: S-1 Elev./Depth: 0.4'-1.5'
□ Source: NJV505 Sample No.: S-2 Elev./Depth: 1.5'-5.0'
△ Source: NJV505 Sample No.: S-3 Elev./Depth: 5.4'-8.8'

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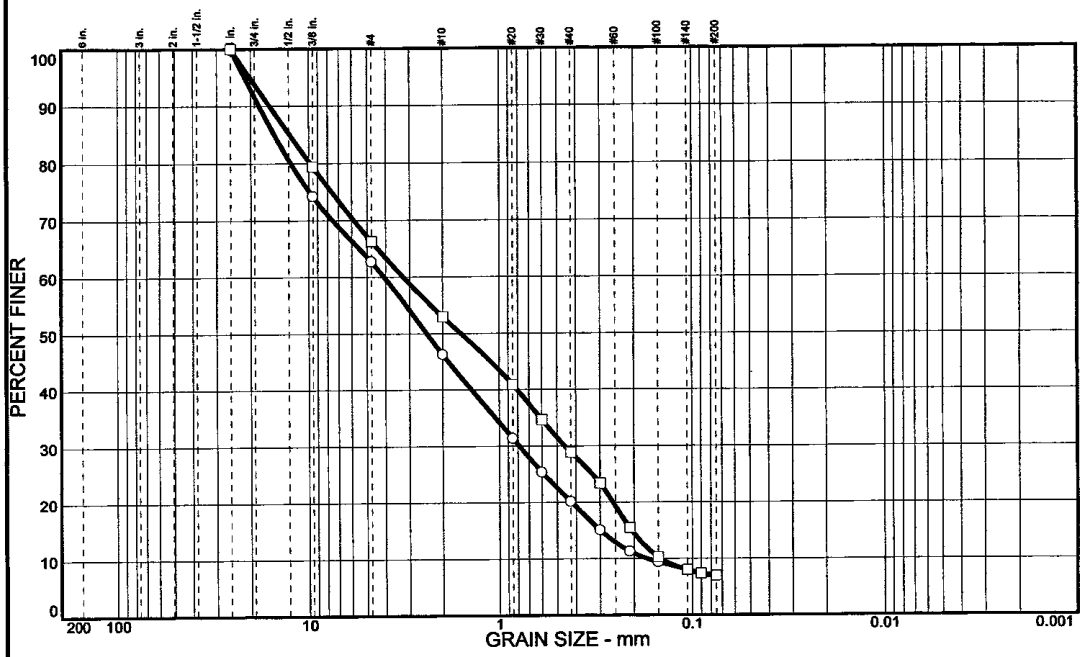

	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		37.3	55.7	7.0		SW-SM			
□		33.7	59.3	7.0		SW-SM			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □
1	100.0	100.0
3/8	74.2	79.4
GRAIN SIZE		
D_{60}	4.07	3.24
D_{30}	0.785	0.456
D_{10}	0.171	0.146
COEFFICIENTS		
C_c	0.89	0.44
C_u	23.81	22.24

SIEVE number size	PERCENT FINER ○	PERCENT FINER □
#4	62.7	66.3
#10	46.3	53.0
#20	31.4	40.9
#30	25.4	34.7
#40	20.2	28.9
#50	15.1	23.4
#70	11.3	15.5
#100	9.4	10.3
#140	8.0	8.0
#170	7.3	7.4
#200	7.0	7.0

SOIL DESCRIPTION

○ Gray/tan fine to coarse SAND and gravel, trace silt.

□ Gray/tan fine to medium SAND, some gravel, little coarse sand, trace silt.

REMARKS:

○

□

○ Source: NJV505 Sample No.: S-4 Elev./Depth: 8.8'-9.9'

□ Source: NJV505 Sample No.: S-5 Elev./Depth: 9.9'-10.7'

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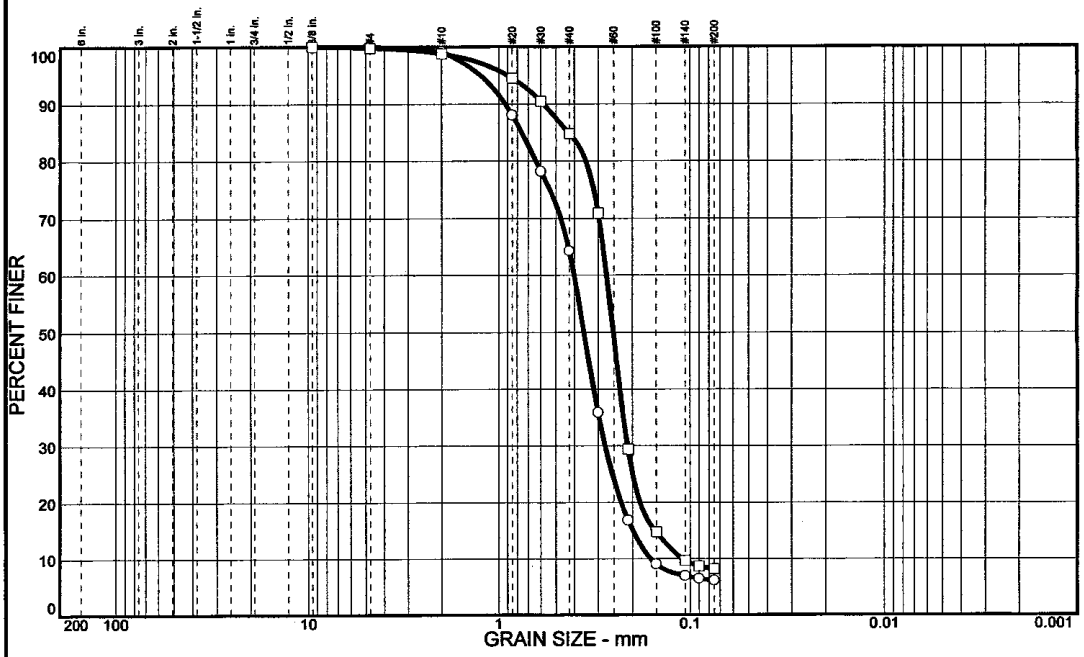
Project: Vibrocoring, New Jersey Coast, Lower Cape May Inlet PED, Contract #DACW-61-98-D-0008, Task Order #8.

Project No.: 3769.GI Date/chk'd by: June 1999/WHS

Particle Size Distribution Report NJV-505



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○			93.8	6.2		SP-SM			
□		0.2	91.6	8.2		SP-SM			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □
3/8	100.0	100.0
GRAIN SIZE		
D_{60}	0.400	0.271
D_{30}	0.276	0.211
D_{10}	0.160	0.109
COEFFICIENTS		
C_c	1.19	1.51
C_u	2.50	2.48

SIEVE number size	PERCENT FINER ○	PERCENT FINER □
#4	100.0	99.8
#10	99.2	98.8
#20	88.1	94.5
#30	78.2	90.5
#40	64.3	84.8
#50	35.9	70.9
#70	16.9	29.4
#100	9.1	14.8
#140	7.0	9.7
#170	6.5	8.7
#200	6.2	8.2

SOIL DESCRIPTION

○ White/gray fine SAND, some medium sand, trace silt, trace coarse sand.

□ White/gray fine SAND, little fine sand, trace silt, trace coarse sand.

REMARKS:

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○ Source: NJV505 Sample No.: S-6 Elev./Depth: 10.7'-15.0'

□ Source: NJV505 Sample No.: S-7 Elev./Depth: 15.0'-18.5'

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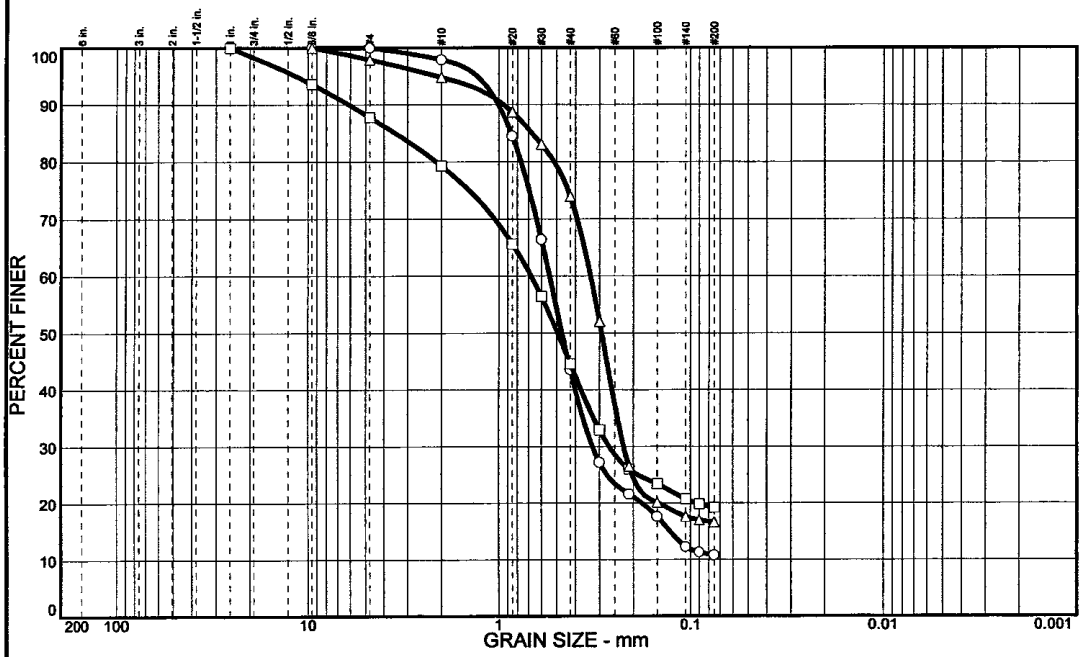
Particle Size Distribution Report NJV-506



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○			89.2	10.8		SP-SM			
□		12.2	68.6	19.2		SM			
△		2.1	81.3	16.6		SM			

SIEVE inches size	PERCENT FINER ○	□	△
1		100.0	
3/8	100.0	93.6	100.0
GRAIN SIZE			
D_{60}	0.544	0.679	0.334
D_{30}	0.326	0.267	0.224
D_{10}			
COEFFICIENTS			
C_c			
C_u			

SIEVE number size	PERCENT FINER ○	□	△
#4	100.0	87.8	97.9
#10	97.9	79.3	94.8
#20	84.5	65.6	88.7
#30	66.4	56.4	83.0
#40	43.5	44.6	73.9
#50	27.2	32.9	52.0
#70	21.6	26.0	26.5
#100	17.6	23.4	20.1
#140	12.3	20.7	17.6
#170	11.3	19.8	17.0
#200	10.8	19.2	16.6

SOIL DESCRIPTION

○ Gray medium SAND, some fine sand, trace silt, trace coarse sand

□ Gray medium SAND, some fine sand, little silt, little gravel, trace coarse sand.

△ Gray/tan fine SAND, some medium sand, little silt, trace coarse sand, trace gravel.

REMARKS:

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○ Source: NJV506	Sample No.: S-1	Elev./Depth: 0.4'-1.4'
□ Source: NJV506	Sample No.: S-2	Elev./Depth: 1.4'-4.7'
△ Source: NJV506	Sample No.: S-3	Elev./Depth: 4.7'-8.0'

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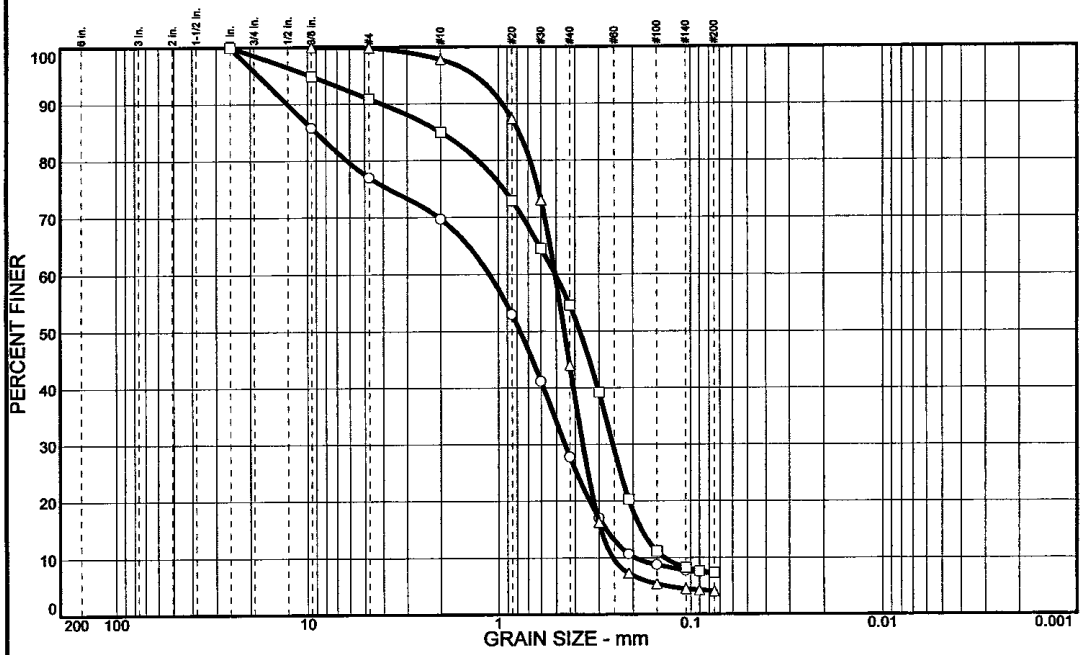
Project No.: 3769.GI Date/chk'd by: June 1999/WHS

Particle Size Distribution Report NJV-506



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		23.0	69.7	7.3		SP-SM			
□		9.1	83.5	7.4		SP-SM			
△		0.1	95.8	4.1		SP			

SIEVE inches size	PERCENT FINER ○	□	△
1	100.0	100.0	
3/8	85.8	94.9	100.0
GRAIN SIZE			
D_{60}	1.11	0.506	0.506
D_{30}	0.451	0.254	0.364
D_{10}	0.194	0.136	0.254
COEFFICIENTS			
C_c	0.94	0.94	1.03
C_u	5.74	3.71	2.00

SIEVE number size	PERCENT FINER ○	□	△
#4	77.0	90.9	99.9
#10	69.7	85.0	97.8
#20	53.0	72.9	87.3
#30	41.2	64.5	73.0
#40	27.8	54.6	44.0
#50	17.0	39.2	16.2
#70	10.7	20.3	7.3
#100	8.8	11.2	5.4
#140	7.8	8.3	4.5
#170	7.5	7.7	4.3
#200	7.3	7.4	4.1

SOIL DESCRIPTION

○ Tan/gray medium SAND, some gravel, some fine sand, trace coarse sand, trace silt.

□ Tan/gray fine SAND, some medium sand, trace gravel, trace coarse sand, trace silt.

△ Tan medium SAND and fine sand, trace silt, trace coarse sand.

REMARKS:

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○ Source: NJV506 Sample No.: S-4 Elev./Depth: 8.0'-9.6'

□ Source: NJV506 Sample No.: S-5 Elev./Depth: 9.6'-14.9'

△ Source: NJV506 Sample No.: S-6 Elev./Depth: 14.9'-20.0'

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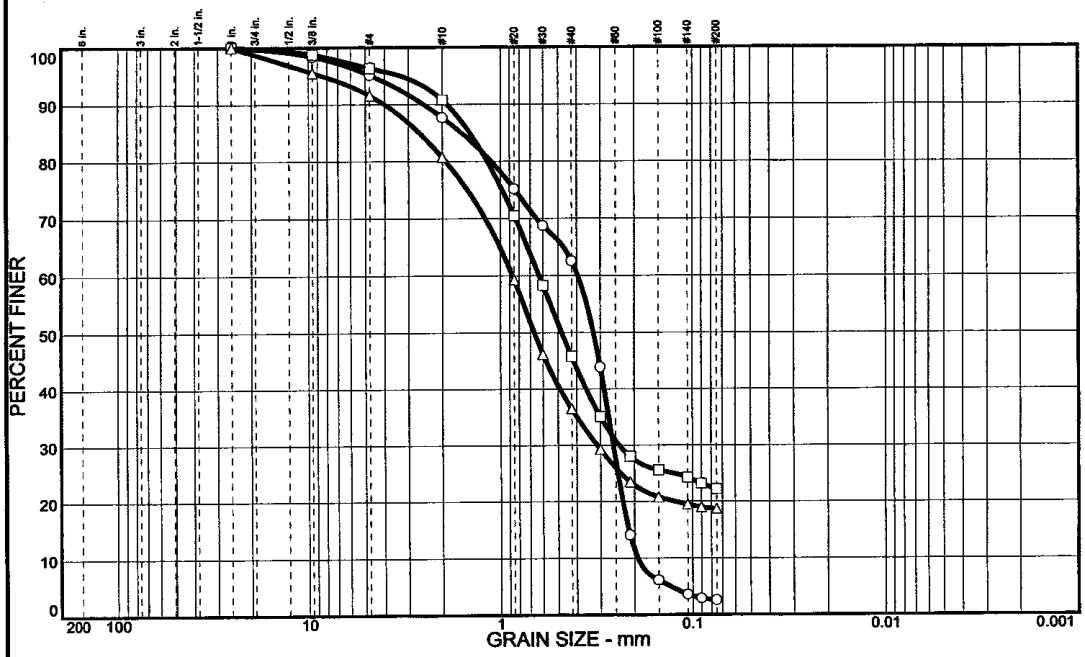
Project No.: 3769.GI Date/chk'd by: June 1999/WHS

Particle Size Distribution Report NJV-507



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		4.8	92.6	2.6		SP			
□		3.6	74.2	22.2		SM			
△		8.4	72.9	18.7		SM			

SIEVE inches size	PERCENT FINER ○	□	△
1	100.0	100.0	100.0
3/8	98.4	98.8	95.6
GRAIN SIZE			
D_{60}	0.394	0.629	0.867
D_{30}	0.257	0.239	0.311
D_{10}	0.192		
COEFFICIENTS			
C_c	0.87		
C_u	2.05		

SIEVE number size	PERCENT FINER ○	□	△
#4	95.2	96.4	91.6
#10	87.7	90.8	80.7
#20	75.2	70.5	59.3
#30	68.7	58.3	46.2
#40	62.6	45.8	36.5
#50	43.9	35.1	29.3
#70	14.1	28.0	23.5
#100	6.1	25.6	20.8
#140	3.6	24.3	19.5
#170	2.9	23.2	19.0
#200	2.6	22.2	18.7

SOIL DESCRIPTION

○ Tan fine SAND, some medium sand, trace coarse sand, trace gravel, trace silt.

□ Gray/green medium SAND, some fine sand, some silt, trace coarse sand, trace gravel.

△ Gray/green medium SAND, little silt, little fine sand, little coarse sand, trace gravel.

REMARKS:

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○ Source: NJV507 Sample No.: S-1 Elev./Depth: 0.0'-0.7'

□ Source: NJV507 Sample No.: S-2 Elev./Depth: 0.7'-2.2'

△ Source: NJV507 Sample No.: S-3 Elev./Depth: 2.2'-4.9'

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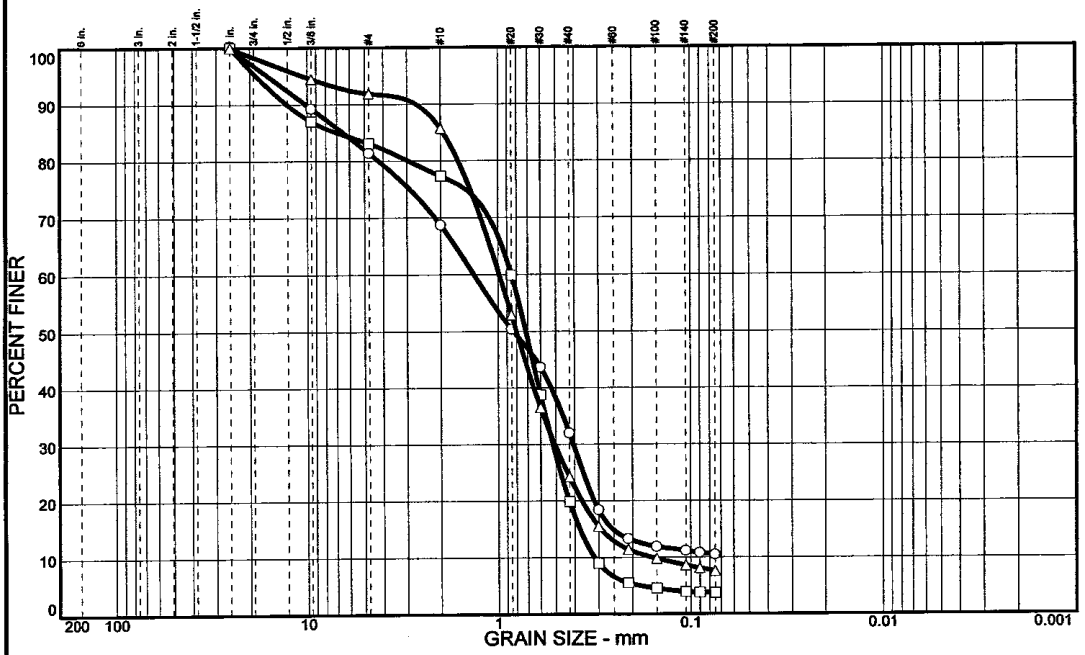
Particle Size Distribution Report NJV-507



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		18.6	70.9	10.5		SP-SM			
□		16.9	79.4	3.7		SP			
△		8.1	84.3	7.6		SW-SM			

SIEVE inches size	PERCENT FINER ○	□	△
1	100.0	100.0	100.0
3/8	89.3	87.0	94.5
GRAIN SIZE			
D_{60}	1.34	0.852	0.986
D_{30}	0.405	0.518	0.506
D_{10}		0.315	0.158
COEFFICIENTS			
C_c		1.00	1.64
C_u		2.70	6.23

SIEVE number size	PERCENT FINER ○	□	△
#4	81.4	83.1	91.9
#10	68.7	77.3	85.7
#20	50.4	59.9	52.9
#30	43.7	38.8	36.5
#40	32.0	19.9	24.3
#50	18.4	9.0	15.5
#70	13.3	5.5	11.4
#100	11.9	4.5	9.8
#140	11.2	3.9	8.6
#170	10.8	3.8	8.1
#200	10.5	3.7	7.6

SOIL DESCRIPTION

○ Tan/green medium SAND, some fine sand, little gravel, little coarse sand, little silt.

□ Tan/green medium SAND, little gravel, little fine sand, trace coarse sand, trace silt.

△ Orange/tan/green medium SAND, little fine sand, trace gravel, trace silt, trace coarse sand.

REMARKS:

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○ Source: NJV507 Sample No.: S-4 Elev./Depth: 4.9'-9.2'

□ Source: NJV507 Sample No.: S-5 Elev./Depth: 9.4'-14.5'

△ Source: NJV507 Sample No.: S-6 Elev./Depth: 14.5'-16.7'

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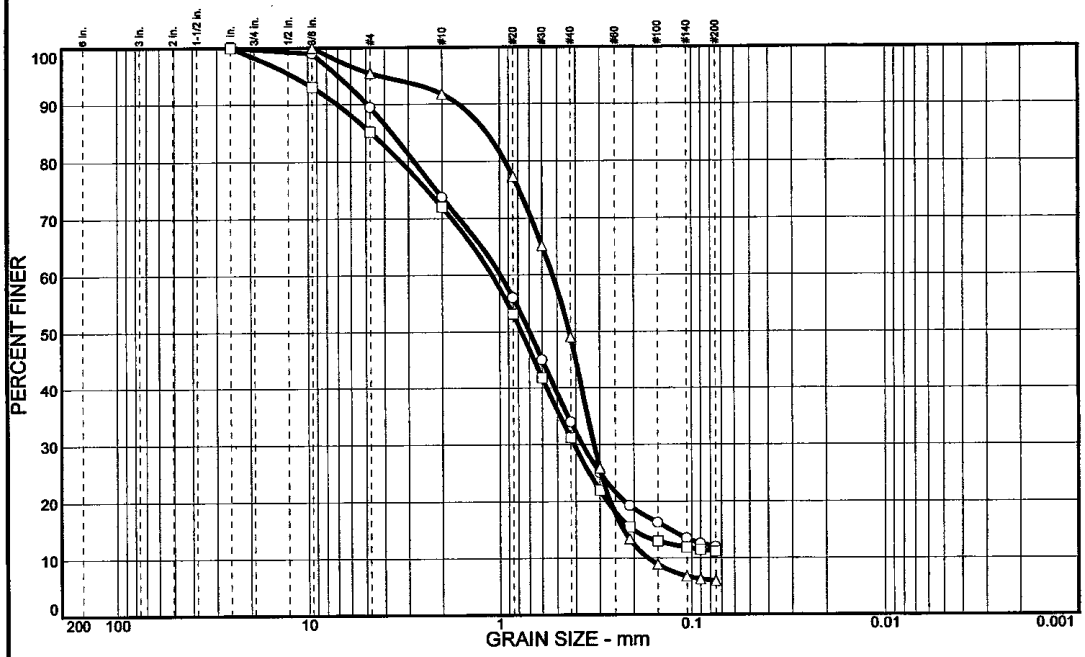
Particle Size Distribution Report NJV-508



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		10.5	77.5	12.0		SP-SM			
□		14.8	74.0	11.2		SP-SM			
△		4.5	89.5	6.0		SP-SM			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □	PERCENT FINER △
1	100.0	100.0	
3/8	99.0	93.1	100.0
GRAIN SIZE			
D_{60}	0.990	1.10	0.528
D_{30}	0.368	0.408	0.321
D_{10}			0.168
COEFFICIENTS			
C_c			1.16
C_u			3.15

SIEVE number size	PERCENT FINER ○	PERCENT FINER □	PERCENT FINER △
#4	89.5	85.2	95.5
#10	73.7	72.0	91.8
#20	56.0	53.1	77.3
#30	45.0	41.8	65.1
#40	34.0	31.2	49.0
#50	25.1	22.0	25.9
#70	19.3	15.5	13.4
#100	16.3	13.0	8.9
#140	13.5	11.9	6.8
#170	12.6	11.5	6.3
#200	12.0	11.2	6.0

SOIL DESCRIPTION

○ Dark gray medium SAND, some fine sand, little coarse sand, little silt, little gravel.

□ Dark gray medium SAND, little fine sand, little gravel, little coarse sand, little silt.

△ Tan/gray fine SAND and medium sand, trace silt, trace gravel, trace coarse sand.

REMARKS:

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○ Source: NJV508	Sample No.: S-1	Elev./Depth: 0.0'-4.7'
□ Source: NJV508	Sample No.: S-2	Elev./Depth: 4.7'-9.6'
△ Source: NJV508	Sample No.: S-3	Elev./Depth: 9.6'-14.1'

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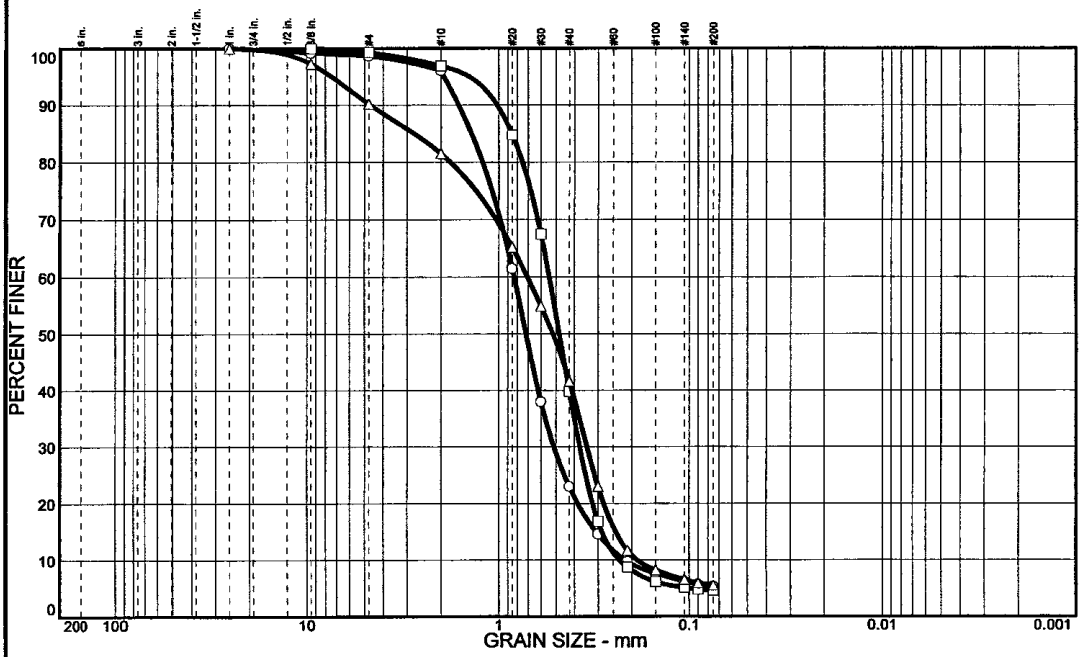
Particle Size Distribution Report NJV-508



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		1.3	93.4	5.3		SP-SM			
□		0.7	94.7	4.6		SP			
△		9.8	84.7	5.5		SP-SM			

SIEVE inches size	PERCENT FINER ○	□	△
1	100.0		100.0
3/8	99.2	100.0	97.3
	GRAIN SIZE		
D_{60}	0.831	0.542	0.707
D_{30}	0.513	0.374	0.343
D_{10}	0.217	0.233	0.187
	COEFFICIENTS		
C_c	1.46	1.11	0.89
C_u	3.83	2.33	3.78

SIEVE number size	PERCENT FINER ○	□	△
#4	98.7	99.3	90.2
#10	96.1	96.9	81.5
#20	61.5	84.8	65.2
#30	38.0	67.5	54.9
#40	23.0	39.8	41.6
#50	14.6	16.9	23.0
#70	9.7	8.7	11.7
#100	7.6	6.1	8.2
#140	6.2	5.1	6.5
#170	5.7	4.8	5.9
#200	5.3	4.6	5.5

SOIL DESCRIPTION

○ Gray/tan medium SAND, little fine sand, trace silt, trace coarse sand, trace gravel.

□ Tan medium SAND, some fine sand, trace silt, trace coarse sand, trace gravel.

△ Gray/tan medium SAND and fine sand, trace gravel, trace coarse sand, trace silt.

REMARKS:

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○ Source: NJV508 Sample No.: S-4 Elev./Depth: 14.1'-14.8'
□ Source: NJV508 Sample No.: S-5 Elev./Depth: 14.8'-18.0'
△ Source: NJV508 Sample No.: S-6 Elev./Depth: 18.0'-18.8'

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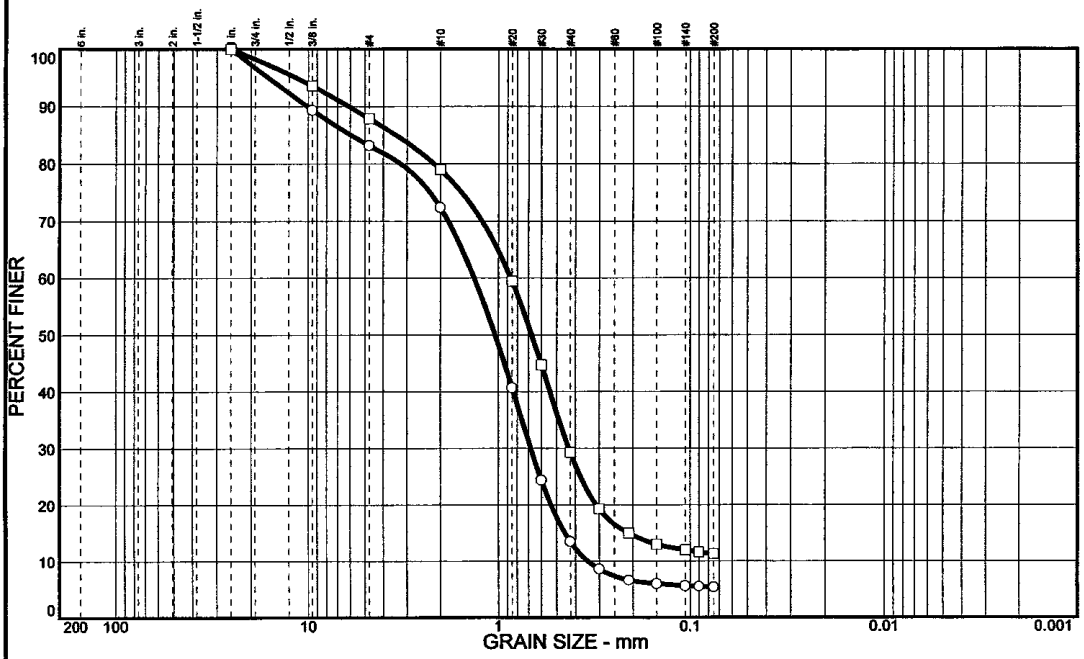
Particle Size Distribution Report NJV-509



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		16.8	77.8	5.4		SP-SM			
□		12.1	76.6	11.3		SP-SM			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □
1	100.0	100.0
3/8	89.4	93.6
GRAIN SIZE		
D_{60}	1.33	0.864
D_{30}	0.681	0.433
D_{10}	0.344	
COEFFICIENTS		
C_c	1.01	
C_u	3.87	

SIEVE number size	PERCENT FINER ○	PERCENT FINER □
#4	83.2	87.9
#10	72.4	79.0
#20	40.7	59.4
#30	24.4	44.7
#40	13.5	29.3
#50	8.6	19.3
#70	6.6	15.0
#100	6.0	13.0
#140	5.6	12.0
#170	5.5	11.6
#200	5.4	11.3

SOIL DESCRIPTION

○ Gray/orange medium SAND, little gravel, little coarse sand, trace fine sand, trace silt.

□ Orange/white medium SAND, little fine sand, little gravel, little silt, trace coarse sand.

REMARKS:

○

□

○ Source: NJV509 Sample No.: S-1 Elev./Depth: 0.0'-4.7'

□ Source: NJV509 Sample No.: S-2 Elev./Depth: 4.7'-9.6'

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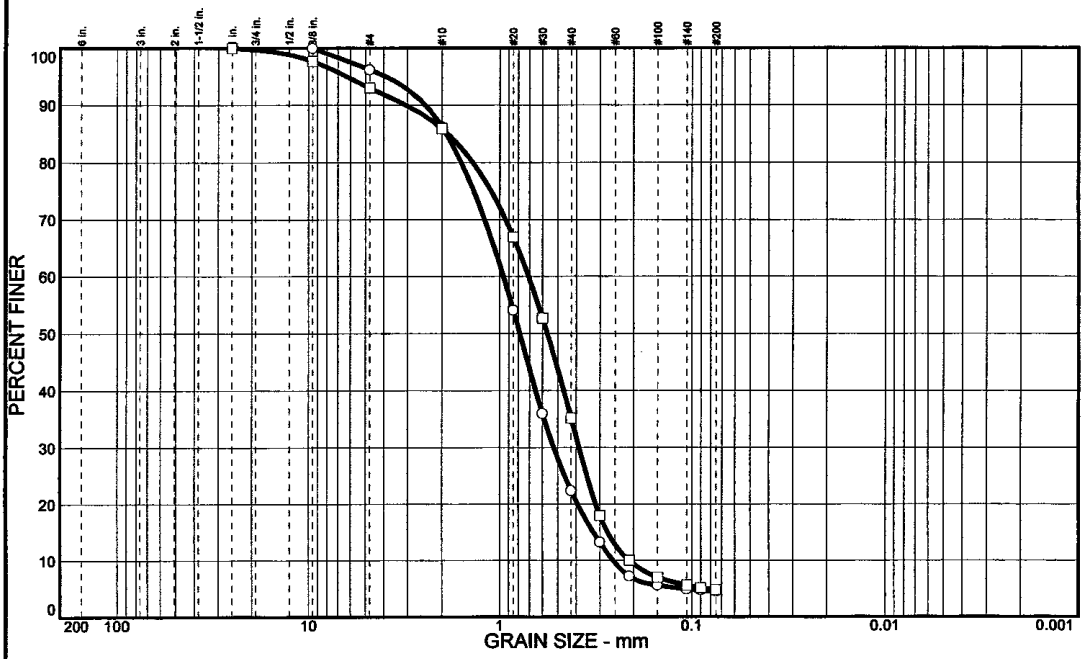
Particle Size Distribution Report NJV-509



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		3.8	91.7	4.5		SP			
□		7.0	88.2	4.8		SP			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □
1		100.0
3/8	100.0	97.7
GRAIN SIZE		
D_{60}	0.957	0.709
D_{30}	0.524	0.386
D_{10}	0.256	0.210
COEFFICIENTS		
C_c	1.12	1.00
C_u	3.74	3.38

SIEVE number size	PERCENT FINER ○	PERCENT FINER □
#4	96.2	93.0
#10	86.2	85.9
#20	54.1	66.9
#30	36.0	52.7
#40	22.4	35.2
#50	13.2	18.0
#70	7.2	10.0
#100	5.6	7.0
#140	4.9	5.6
#170	4.7	5.1
#200	4.5	4.8

SOIL DESCRIPTION

○ Orange/white medium SAND, little fine sand, trace coarse sand, trace silt, trace gravel.

□ Orange/white medium SAND, some fine sand, trace coarse sand, trace gravel, trace silt.

REMARKS:

○

□

○ Source: NJV509 Sample No.: S-3 Elev./Depth: 9.6'-14.8'

□ Source: NJV509 Sample No.: S-4 Elev./Depth: 14.8'-20.0'

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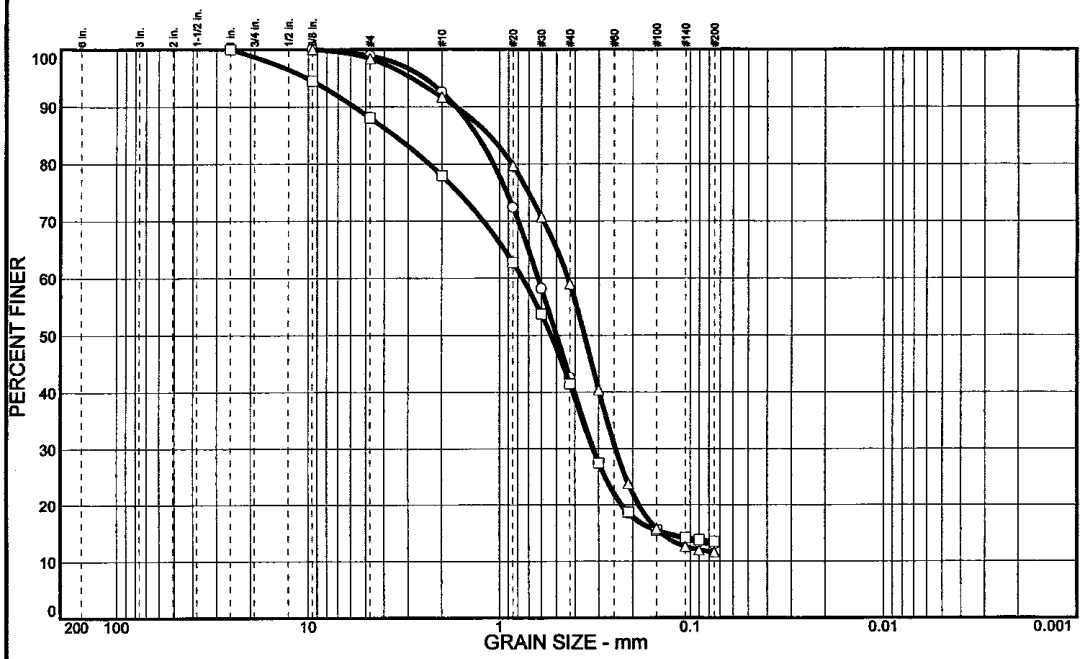
Particle Size Distribution Report NJV-510



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		1.1	85.9	13.0		SP-SM			
□		11.9	74.6	13.5		SP-SM			
△		1.6	86.8	11.6		SP-SM			

SIEVE inches size	PERCENT FINER ○	□	△
1		100.0	
3/8	100.0	94.5	100.0
	GRAIN SIZE		
D_{60}	0.625	0.757	0.435
D_{30}	0.320	0.321	0.245
D_{10}			
	COEFFICIENTS		
C_c			
C_u			

SIEVE number size	PERCENT FINER ○	□	△
#4	98.9	88.1	98.4
#10	92.6	78.0	91.7
#20	72.4	62.7	79.7
#30	58.2	53.7	70.7
#40	42.6	41.5	59.0
#50	27.6	27.5	40.4
#70	18.5	18.7	23.8
#100	15.5	15.5	15.8
#140	14.0	14.2	12.6
#170	13.4	13.8	12.0
#200	13.0	13.5	11.6

SOIL DESCRIPTION

○ Gray/tan medium SAND, some fine sand, little silt, trace coarse sand, trace gravel.

□ Gray medium SAND, some fine sand, little silt, little gravel, trace coarse sand.

△ Gray/tan fine SAND, some medium sand, little silt, trace coarse sand, trace gravel.

REMARKS:

○

□

△

○ Source: NJV510	Sample No.: S-1	Elev./Depth: 0.0'-1.6'
□ Source: NJV510	Sample No.: S-2	Elev./Depth: 1.6'-4.4'
△ Source: NJV510	Sample No.: S-3	Elev./Depth: 4.7'-7.5'

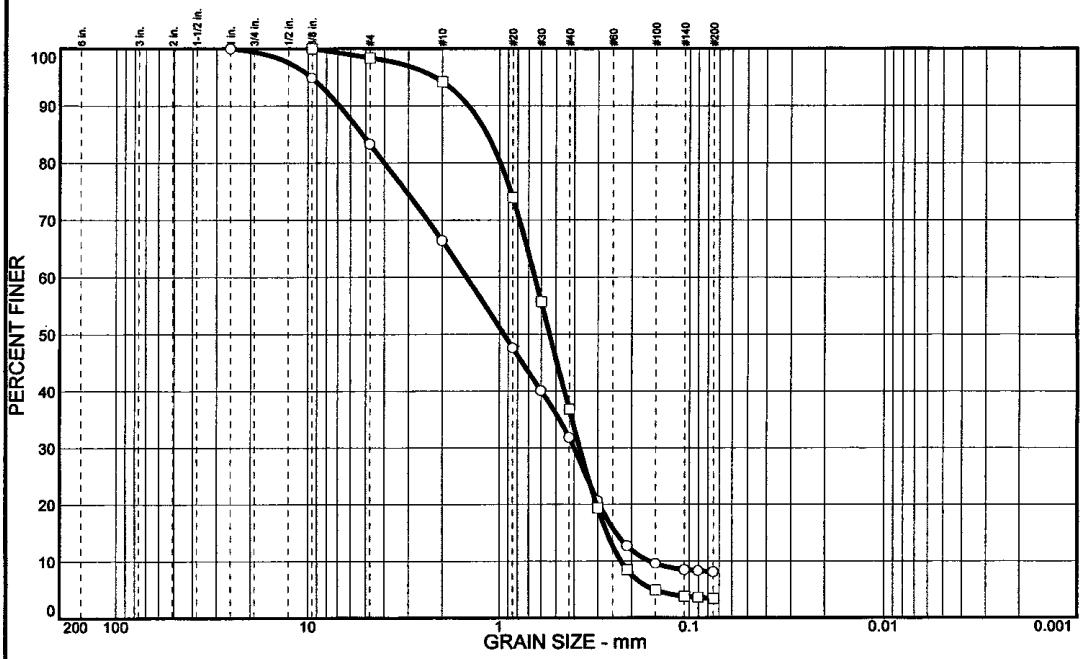
DUFFIELD ASSOCIATES
5400 LIMESTONE ROAD
WILMINGTON, DELAWARE 19808-1232
TEL. (302) 239-6634 FAX (302) 239-8485
E-MAIL: DUFFIELD@DUFFNET.COM

Client: U.S. Army Corps of Engineers

Project: Vibrocoring, New Jersey Coast, Lower Cape May Meadows PED, Contract # DACW-61-9-D-0008, Task Order #8.

Project No.: 3769.GI Date/chk'd by: June 1999/WHS

Particle Size Distribution Report NJV-510



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		16.7	75.2	8.1		SW-SM			
□		1.6	95.0	3.4		SP			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □
1	100.0	
3/8	94.9	100.0
GRAIN SIZE		
D_{60}	1.49	0.648
D_{30}	0.401	0.374
D_{10}	0.161	0.225
COEFFICIENTS		
C_c	0.67	0.96
C_u	9.25	2.88

SIEVE number size	PERCENT FINER ○	PERCENT FINER □
#4	83.3	98.4
#10	66.4	94.2
#20	47.6	73.9
#30	40.1	55.7
#40	31.8	36.8
#50	20.6	19.4
#70	12.7	8.5
#100	9.6	4.9
#140	8.5	3.8
#170	8.3	3.6
#200	8.1	3.4

SOIL DESCRIPTION

○ Gray/tan medium SAND, some fine sand, little coarse sand, little gravel, trace silt.

□ Gray/an medium SAND, some fine sand, trace coarse sand, trace silt, trace gravel.

REMARKS:

○

□

○ Source: NJV510 Sample No.: S-4 Elev./Depth: 7.5'-9.6'

□ Source: NJV510 Sample No.: S-5 Elev./Depth: 9.6'-12.3'

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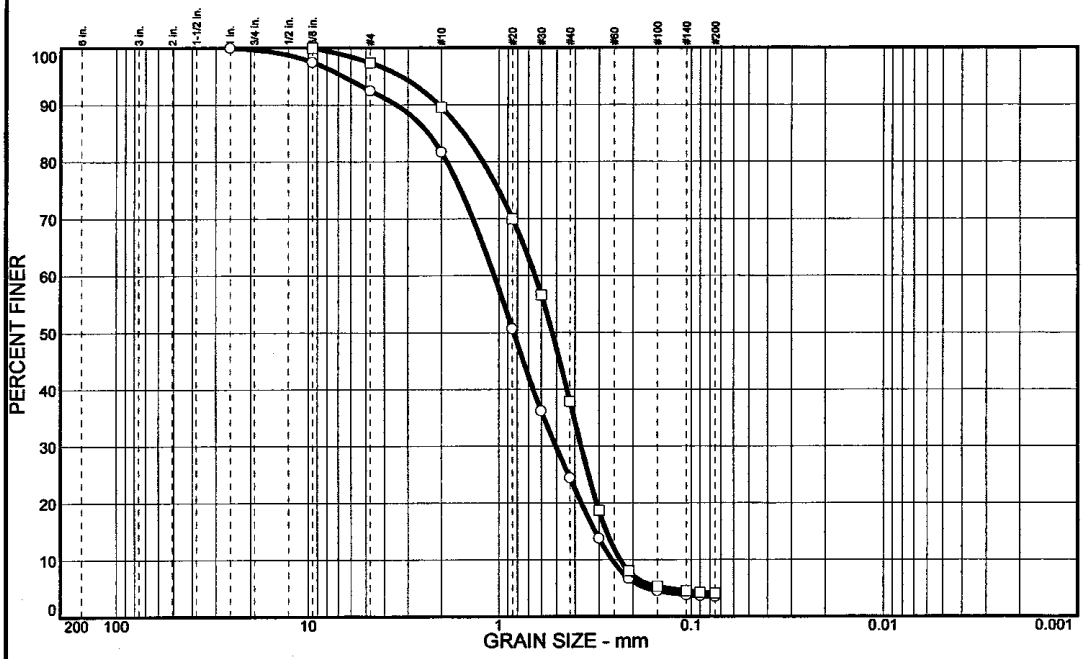
Client: U.S. Army Corps of Engineers

Project: Vibrocoring, New Jersey Coast, Lower Cape May Meadows PED, Contract # DACW-61-9-D-0008, Task Order #8.

Project No.: 3769.GI Date/chk'd by: June 1999/WHS

Particle Size Distribution Report NJV-510



	% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○		7.5	89.0	3.5		SP			
□		2.6	93.3	4.1		SP			

SIEVE inches size	PERCENT FINER ○	PERCENT FINER □	
1	100.0		
3/8	97.5	100.0	
	GRAIN SIZE		
D_{60}	1.06	0.648	
D_{30}	0.504	0.372	
D_{10}	0.256	0.232	
	COEFFICIENTS		
C_c	0.94	0.92	
C_u	4.14	2.79	

SIEVE number size	PERCENT FINER ○	PERCENT FINER □	
#4	92.5	97.4	
#10	81.7	89.6	
#20	50.7	70.0	
#30	36.2	56.6	
#40	24.4	37.9	
#50	13.8	18.7	
#70	6.7	8.0	
#100	4.5	5.3	
#140	3.8	4.5	
#170	3.6	4.2	
#200	3.5	4.1	

SOIL DESCRIPTION

○ Tan/white/gray medium SAND, little fine sand, little coarse sand, trace gravel, trace silt.

□ Tan/white/gray medium SAND, some fine sand, trace coarse sand, trace silt, trace gravel.

REMARKS:

○

□

○ Source: NJV510 Sample No.: S-6 Elev./Depth: 12.3'-14.6'

□ Source: NJV510 Sample No.: S-7 Elev./Depth: 14.6'-19.8'

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E-MAIL: DUFFIELD@DUFFNET.COM

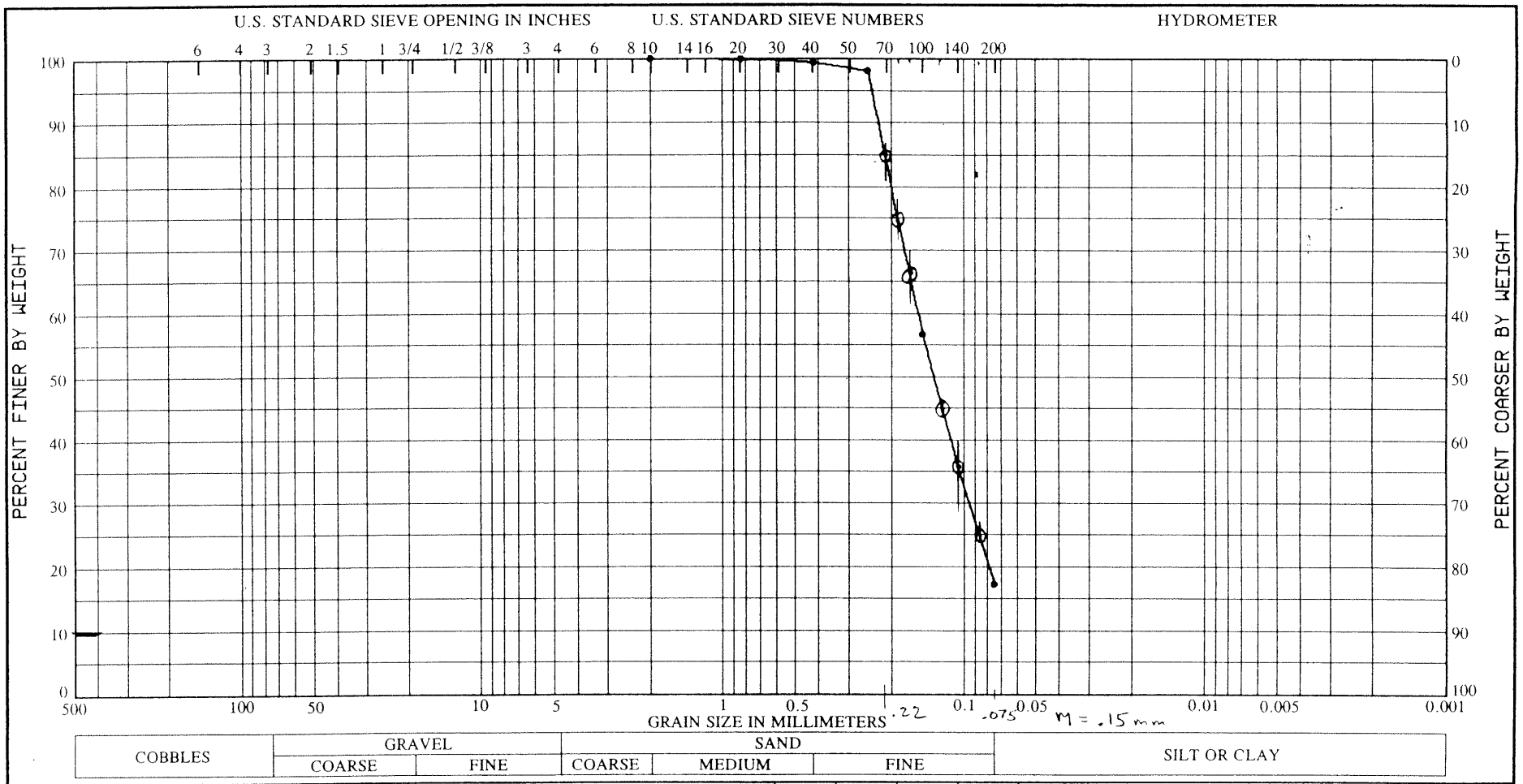
Client: U.S. Army Corps of Engineers

Project: Vibrocoring, New Jersey Coast, Lower Cape May Meadows PED, Contract # DACW-61-9-D-0008, Task Order #8.

Project No.: 3769.GI Date/chk'd by: June 1999/WHS

DEPARTMENT OF THE ARMY, SOUTH ATLANTIC DIVISION LABORATORY
CORPS OF ENGINEERS, 611 SOUTH COBB DRIVE, MARIETTA, GA. 30060

WORK ORDER: 8015
REQUISITION: CENAP-EN-96-813



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

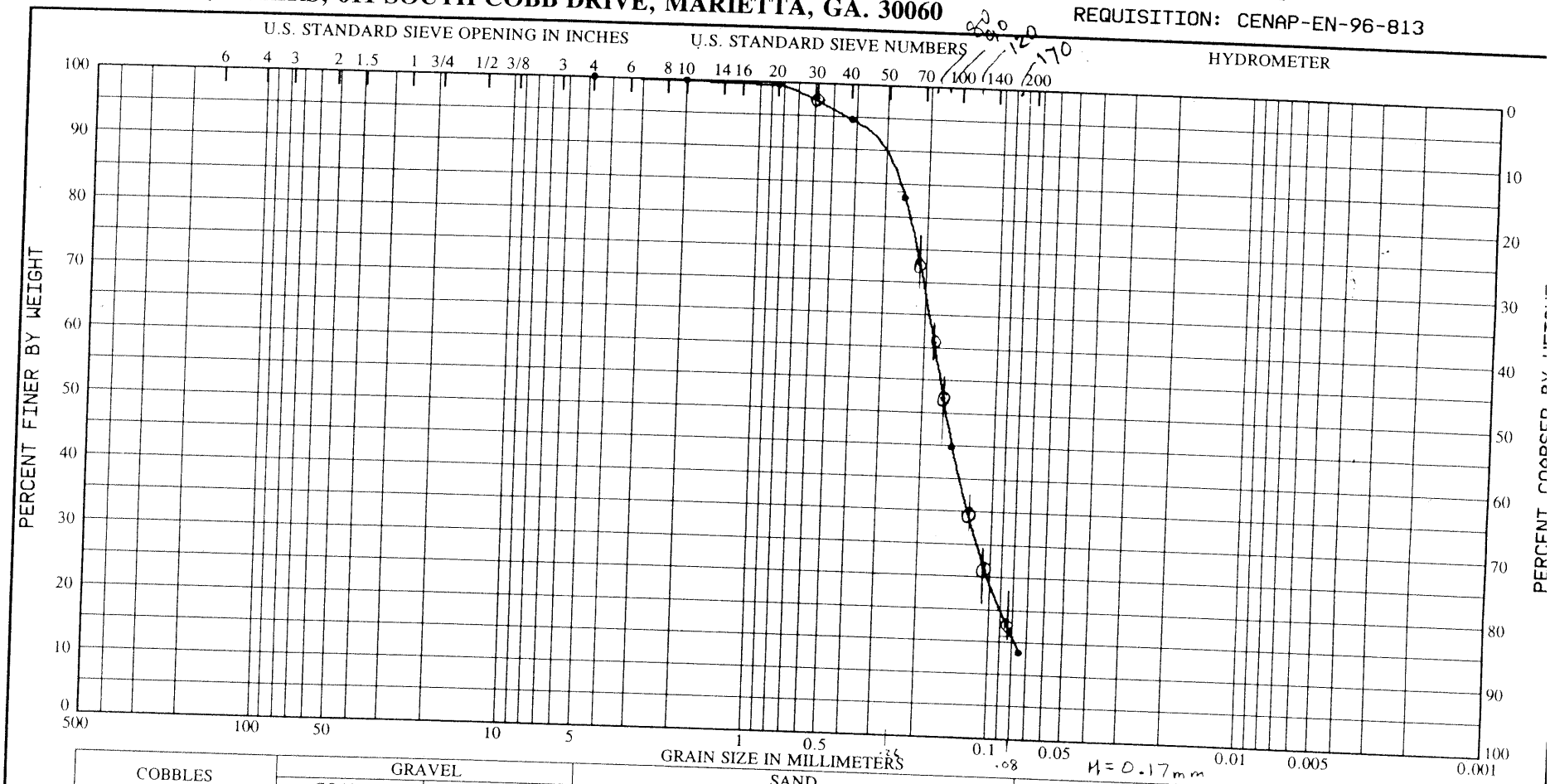
Sample No.	Elev (Ft)	(VISUAL) Classification	Nat w%	LL	PL	PI
4	14.2-14.5	GRAY, SILTY SAND (SM), WITH A TRACE OF MICA.				

Project CAPE MAY
VIBRA-CORE SAMPLES
Lab No. 184/1266
Boring No. NJV-222
Date 07/24/96

GRADATION CURVES

DEPARTMENT OF THE ARMY, SOUTH ATLANTIC DIVISION LABORATORY
CORPS OF ENGINEERS, 611 SOUTH COBB DRIVE, MARIETTA, GA. 30060

WORK ORDER: 8015
REQUISITION: CENAP-EN-96-813



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Elev (Ft)	(VISUAL) Classification	Nat w%	LL	PL	PI
3	11.0-11.3	GRAY, SILTY SAND (SM), WITH A TRACE OF MICA.				

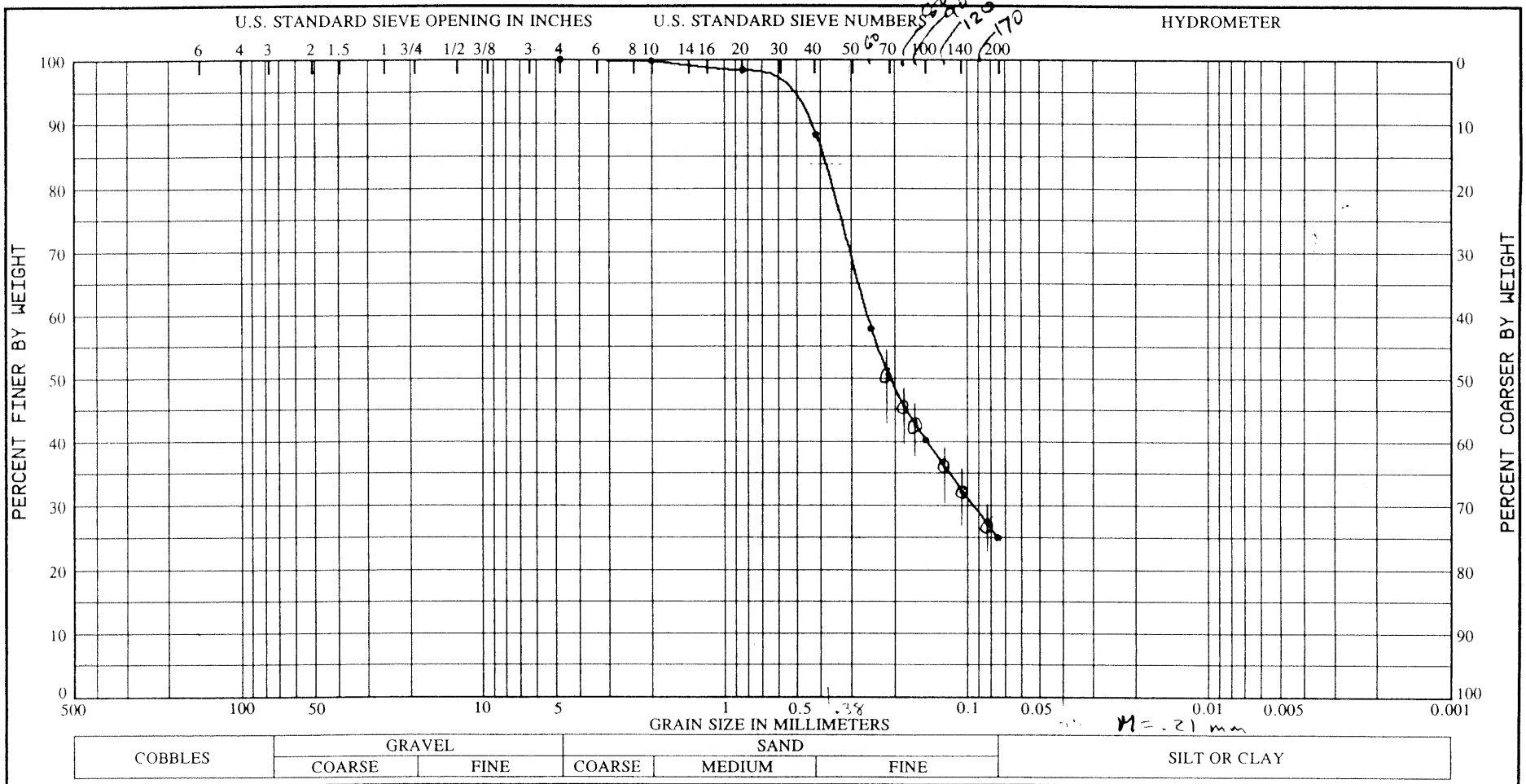
Project CAPE MAY
VIBRA-CORE SAMPLES
Lab No. 184/1266
Boring No. NJV-222
Date 07/24/96

GRADATION CURVES

W912BU-04-B-0008

DEPARTMENT OF THE ARMY, SOUTH ATLANTIC DIVISION LABORATORY
CORPS OF ENGINEERS, 611 SOUTH COBB DRIVE, MARIETTA, GA. 30060

WORK ORDER: 8015
REQUISITION: CENAP-EN-96-813



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

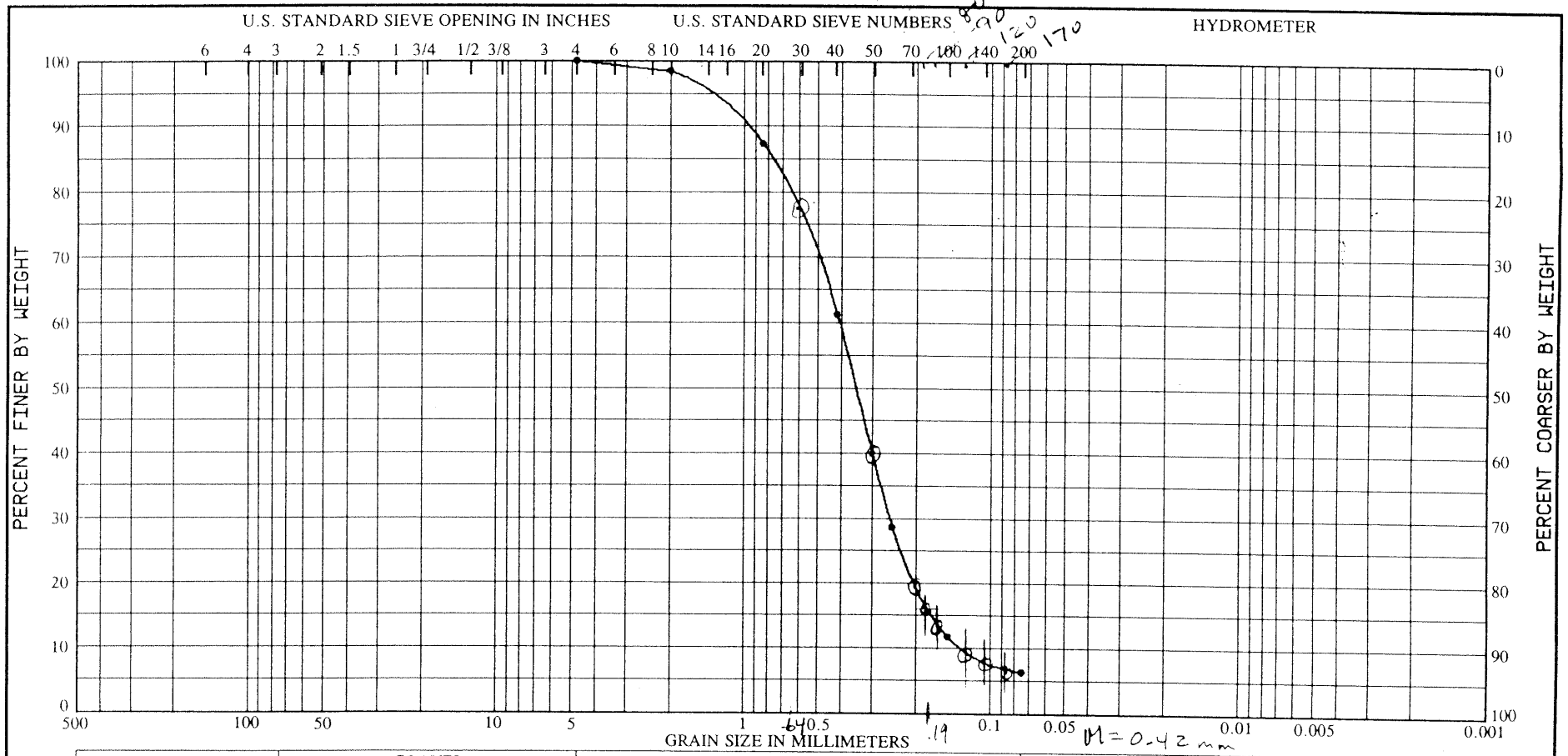
Sample No.	Elev (Ft)	(VISUAL) Classification	Nat w%	LL	PL	PI
2	7.4-7.7	GRAY, CLAYEY SAND (SC), WITH A TRACE OF MICA.				

Project CAPE MAY
VIBRA-CORE SAMPLES
Lab No. 184/1266
Boring No. NJV-222
Date 07/24/96

GRADATION CURVES

DEPARTMENT OF THE ARMY, SOUTH ATLANTIC DIVISION LABORATORY
CORPS OF ENGINEERS, 611 SOUTH COBB DRIVE, MARIETTA, GA. 30060

WORK ORDER: 8015
REQUISITION: CENAP-EN-96-813



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Elev (Ft)	(VISUAL) Classification	Nat w%	LL	PL	PI
1	3.0-3.3	GRAY, POORLY GRADED SILTY SAND (SP-SM), WITH A TRACE OF MICA.				

Project CAPE MAY
VIBRA-CORE SAMPLES
Lab No. 184/1266
Boring No. NJV-222
Date 07/24/96

GRADATION CURVES

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SECTION 00880

PRE-PLACEMENT CONDITION SURVEY CROSS SECTION LOCATIONS

Area No. 1

Baseline No. 1 - From the West Jetty at the Cape May Inlet, Station 0+00 to Third Avenue, Station 197+00

NOTE: ANGLE OF PROFILE RELATIVE TO THE SURVEY BASELINE = 90 DEGREES FOR ALL STATIONS.

Station
004+00
008+00
012+00
020+00
030+00
040+00
046+00
050+00
064+00
072+00
080+00
086+00
101+00
113+00
120+00
124+00
128+00
132+00
138+00
142+00
145+00
154+00
157+00
166+00
170+00
174+00
180+00
186+00
190+00
194+00

Area Nos. 2 and 3

Baseline No. 2 - From Station 7+52 to Station 118+61

NOTE: ANGLE OF PROFILE RELATIVE TO THE SURVEY BASELINE NUMBER TWO = 90 DEGREES FOR ALL STATIONS, EXCEPT FOR THE FOLLWING STATIONS AS NOTED.

Station	Azimuth
010+00	
015+00	
020+00	
030+00	
035+00	
045+00	
055+00	
060+00	
065+00	
069+99	
075+00	
077+62	S7D 13'35"E
081+61	S89D 12'59"W
083+29	S83D 8'2"W
086+32	S77D 5'58"W
087+39	S77D 10'20"W
089+13	S70D 57'44"W
090+78	S64D 51'28"W
091+79	S64D 52'8"W
093+53	S61D 5'17"W
095+25	S57D 20'16"W
096+25	S57D 24'27"W
098+17	S55D 36'40"W
100+09	S53D 47'40"W
102+77	S52D 5'25"W
103+98	S52D 5'17"W
105+66	S46D 56'29"W
107+40	S42D 47'25"W
109+23	S36D 43'38"W
110+30	S36D 49'52"W
114+10	S33D 10'27"W
115+78	S29D 39'2"W
117+49	S26D 4'3"W

SECTION 00890

LOCATIONS OF QUANTITY SURVEYS CROSS SECTIONS

Area 1 (Survey Baseline Number 1):

All survey lines for quantity surveys are to be perpendicular to the survey baseline. Contractor's quantity surveys shall be spaced at 100' beginning with Station 0+00.

Area 2 and Area 3(Survey Baseline Number 2):

Contractor's quantity surveys shall be spaced at 200' beginning with Station 7+52 to Station 118+61. Survey lines for quantity surveys are to be perpendicular to the survey baseline except as noted below.

Stations	Bearing
077+50	S7d 13' 35"E
079+50	S89d 12' 59"W
081+50	S89d 12' 59"W
083+50	S83d 8' 2"W
085+50	S77d 5' 58"W
087+50	S77d 5' 58"W
089+50	S70d 57' 44"W
087+50	S77d 5' 58"W
091+50	S64d 52' 8"W
093+50	S61d 5' 17"W
095+50	S57d 20' 16"W
097+50	S55d 36' 40"W
099+50	S53d 47' 40"W
101+50	S52d 5' 25"W
103+50	S52d 5' 17"W
105+50	S46d 56' 29"W
107+50	S42d 47' 25"W
109+50	S36d 43' 38"W
111+50	S36d 49' 52"W
113+50	S33d 10' 27"W
115+50	S29d 39' 2"W
117+50	S26d 4' 3"W

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-- End of Project Table of Contents --

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SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.1 DESCRIPTION OF THE CONTRACT WORK

Contract work includes placement of approximately 1,800,000 cubic yards of beachfill in Cape May City, Cape May Meadows and Cape May Point. Beachfill will be required in the following areas as indicated on the contract drawings:

Area 1: Baseline No. 1 - Station 0+00 to 196+90
Area 2: Baseline No. 2 - Station 67+50 to 118+61
Area 3: Baseline No. 2 - Station 67+50 to 7+52

The work also includes, in addition to beachfill: the extension of stormwater outfalls including pipe support systems; the construction of pedestrian, vehicle, and handicap dune crossovers; construction of an access road; planting dune grass; and providing sand fence.

The contract drawings include separate Survey Baselines for Cape May City (Area 1), and Cape May Meadows/Point (Areas 2 and 3). In addition the drawings show a Construction Baseline for Cape May City. All references to "Baselines" throughout the specifications shall be taken to mean "Survey Baselines" unless specifically referenced to the "Construction Baseline".

1.1.1 Base Bid

The base bid portion of the work includes placing beachfill in Areas 1 and 2. At this time, beachfill may not required in Area No. 1 between Stations 39+45 and 60+80, 90+00 and 196+90 of Baseline No. 1. The pre-placement condition surveys will determine if beachfill is to be placed between these stations. For bid purposes, the Contractor shall assume that the Base Bid quantities shall be placed anywhere in Area No. 1 between stations 0+00 and 196+90 of Baseline No. 1.

1.1.2 Optional Work

Option No. 1 includes placing beachfill in Area No. 3 which, if awarded, will be performed using Fiscal year 2005 funds. The award of this option is dependent upon reservations of funds from future appropriations, and from future contribution to the project having one or more non-federal project sponsors.

Option Nos. 2 through 5 consist of separate options to place additional beachfill. Option work will be awarded if the Contracting Officer determines that additional beachfill is required, based on the results of pre-placement condition surveys and changing site conditions as they occur during the contract period. Where additional beachfill is required, the option work would be placed immediately after the bid quantity in a particular area to achieve the template shown on the contract drawings.

1.1.3 Borrow Areas

The borrow areas for beachfill material is located offshore of the beach,

south of the project location.

1.2 REQUIRED ORDER OF WORK

Beachfill required under the base bid shall commence in Area No. 1 at Station 0+00 of Baseline No. 1 and proceed south westward to Station 196+90. Upon completion of beachfill in Area No. 1, beachfill shall then start in Area No. 2 at Station 67+50 of Baseline No. 2 and proceed north westward to Station 118+61.

Prior to placing beachfill material between Station 79+00 to 88+00 (approximately) of Baseline No. 2, the scour hole indicated on the drawing shall be filled to elevation -35 (NAVD 88).

Beachfill required under Option No. 1 shall commence in Area No. 3 at Station 67+50 of Baseline No. 2 and proceed eastward to Station 7+52.

1.3 GENERAL RESTRICTIONS ON WORK

The contractor will not be permitted access to any areas of the beach for beachfill operations until 15 August 2004. Surveying operations will be permitted prior to this date.

Beachfill will not be permitted in Cape May City (Station 78+00 to 196+90 of survey baseline No. 1) until after 6 September 2004.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section --

SECTION 01060

SAFETY

PART 1 GENERAL

1.1 SCOPE OF SECTION

The work specified in this section includes the development and enforcement of a safety and accident prevention program.

1.2 REFERENCES

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

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(Latest Rev.) Safety and Health Requirements Manual

NOTE: EM 385-1-1 and its changes are available at http://www.hq.usace.army.mil/soh/em385/current/current38511.htm. The Contractor shall be responsible for complying with the current edition and all changes posted on the web as of the effective date of this solicitation.

U.S. ARMY CORPS OF ENGINEERS (PHILADELPHIA DISTRICT)

Liberty from Accidents Program	(1996) Philadelphia District Awards Program

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

NOTE: Any submittals classified as "SD-01 Preconstruction Submittals" require approval prior to mobilization to the contract work site. All other submittals, classified as "SD-02" through "SD-11," require approval prior to commencing the particular task to which the submittal is associated.

The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Qualifications; G,DO.

Name and qualifications of the Contractor's proposed safety representative.

Accident Prevention Plan; G,DO.

An accident prevention plan, prepared by the prime Contractor for the specific work, describing in detail how the contractor will implement the pertinent requirements of EM 385-1-1 shall be submitted for approval prior to the start of work. A suggested format for the accident prevention plan is included in EM 385-1-1, Appendix A. The plan shall be prepared for all sites and shall include, but is not limited to, the topic areas listed in Appendix A therein and the requirements of the Paragraph entitled: SAFETY AND HEALTH PROVISIONS. Each topic shall be developed in a concise manner to include management and operational aspects.

The Contractor shall comply with the provisions of EM 381-1-1. If the Contractor is a currently accepted participant in the Dredging Contractors of America(DCA)/United States Army Corps of Engineers(USACE) Dredging Safety Management Program(DSMP), as determined by the DCA/USACE Joint Committee, and holds a current valid Certificate of Compliance for both the Contractor Program and the Dredge(s) to be used to perform the work required under this contract, the Contractor may, in lieu of the submission of an Accident Prevention Plan(APP),

(1) make available for review, upon request, the Contractor's current Safety Management System(SMS) documentation,
(2) submit to the Contracting Officer the current valid Company Certificate for its SMS,
(3) submit the current dredge(s) Certificate of Compliance based on third party audit, and
(4) submit for review and acceptance, site-specific addenda to the SMS as specified in the solicitation.

SD-07 Certificates

Activity Phase Hazard Analysis Plan; G,DO.

Prior to beginning each major phase of work, an activity hazard analysis (phase plan) shall be prepared by the Contractor for that phase of work and submitted for approval. The suggested format for the analysis is contained in Figure 1-1 of EM 385-1-1. A phase is defined as an operation involving a type of work presenting hazards not experienced in previous operations or where a new subcontractor or work crew is to perform work. The analysis shall address the hazards for each activity performed in the phase and shall present the procedures and safeguards necessary to eliminate the hazards or reduce the risk to an acceptable level.

Safety Meeting Reports.

Outline reports of all weekly and monthly safety meeting shall be submitted.

Accident Reports.

A written report for all accidents, utilizing ENG FORM 3394, shall be submitted within 24 hours following such accidents.

OSHA 300 Log.

Contractor's OSHA 300 Log of Injuries shall be submitted monthly.

Floating Plant Inspection; G,DO

A copy of the annual inspection of all plants, not subject to Coast Guard inspection, shall be submitted prior to start of work.

1.4 GENERAL

Worker safety is of paramount importance. The Contractor shall comply with the Contract Clause entitled: ACCIDENT PREVENTION, EM 385-1-1, the Philadelphia District's Liberty from Accidents Program, and all other requirements as specified herein.

1.5 SITE CONDITIONS

The conditions at the work site require that a lifesaving skiff be manned and immediately available when working over water. All safety equipment shall be in accordance with the requirements of EM 385-1-1.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 SAFETY PROGRAM

EM 385-1-1 and all subsequent revisions referred to in the Contract Clause entitled: ACCIDENT PREVENTION of this contract, are hereby supplemented as follows:

a. The Contractor shall designate an employee to be the safety representative who shall be responsible for safety matters and accident prevention activities. This safety representative shall have no other responsibilities. Such duties shall include: (1) assuring applicable safety requirements are incorporated in work methods and (2) inspecting the work to ensure that daily safety measures and instructions are implemented and documented. The proposed safety representative's name and qualifications shall be submitted in writing for approval by the Contracting Officer. This individual shall have prior experience as a safety representative or be able to demonstrate familiarity and understanding of the safety requirements over a prescribed trial period. The safety representative shall have the authority to act on behalf of the Contractors general management to take whatever action is necessary to assure compliance with safety requirements. The safety representative is required to be on the site when work, of any kind, is being performed, to include all shifts.

b. Prior to commencement of any work at the job site, a preconstruction safety meeting will be held between the Contractor's safety representative and the Contracting Officer to discuss the Contractor's safety program and to review the Accident Prevention Plan and Activity Phase Hazard Analysis Plan for the first phase of work.

c. Subsequent jobsite safety meetings shall be held as follows:

(1) A safety meeting shall be held at least once a month and shall be documented by the safety representative with subject and attendees. The safety meeting shall be for the purpose of having all supervisors on the project review past activities, to plan ahead for new or changed operations and to establish safe working procedures to anticipated hazards. An outline report of each monthly meeting shall be submitted to the Contracting Officer.

(2) At least one safety meeting shall be conducted weekly, or whenever new crews begin work, by the appropriate field supervisors or foremen for all workers. An outline report of the meeting giving date, time, attendance, subjects discussed and who conducted the meeting shall be prepared and furnished to the Contracting Officer.

3.2 PHILADELPHIA DISTRICT LIBERTY FROM ACCIDENTS PROGRAM

The Philadelphia District Liberty from Accidents Program is hereby incorporated as part of these specifications. The Liberty from Accidents Program rewards Contractors who exceed safety standards. The program provides local and District-wide awards on a quarterly and annual basis.

a. The Contractor will be evaluated for awards and the final performance evaluation in safety on the frequency rate for the project. The frequency rate is calculated by the following equation: frequency = (number of lost time accidents x 200,000) divided by the number of man-hours for the project. The Contractor shall have a proactive safety plan as outlined in the Liberty from Accidents Program.

b. The Contractor evaluation procedure for the safety category shall be as follows:

RATING	CONTRACTOR FREQUENCY RATE
Outstanding	Less than or equal to 0.25.
Above Average	Greater than 0.25 but less than or equal to 0.75.
Satisfactory	Greater than 0.75 but less than or equal to 0.84.
Marginal	Greater than 0.84 but less than or equal to 1.95.
Unsatisfactory	Greater than 1.95.

Extenuating circumstances will be considered to change the safety rating in limited situations.

3.3 ACCIDENTS

Chargeable lost time accidents are to be investigated by both the Contractor and the Contracting Officer.

3.3.1 Accident Reporting

EM 385-1-1 and the Contract Clause entitled: ACCIDENT PREVENTION are supplemented as follows: The prime Contractor shall report on ENG FORM 3394, provided by the Contracting Officer's Representative, all injuries to employees or to subcontractor employee, and all damage to property and/or equipment. Verbal notification of such accidents shall be made to the Contracting Officer within 8 hours of occurrence. A written report utilizing ENG FORM 3394 shall be submitted to the Contracting Officer within 24 hours following such accidents. The report shall include the following:

a. A description of the circumstances leading up to the accident, the cause of the accident, and corrective measures taken to prevent recurrence.

b. A description of the injury and name and location of the medical facility rendering examination and treatment.

c. A statement as to whether or not the employee was permitted to return to work after examination and treatment by the medical facility, and if not, an estimate or statement of the number of days lost from work. If there have been days lost from work, the employee must be re-examined and declared fit to resume work as of the date of the report.

3.4 OSHA REQUIREMENTS

3.4.1 OSHA 300 Log

A copy of the Contractor's OSHA 300 Log of Injuries shall be submitted in accordance with the Paragraph entitled: SUBMITTALS.

3.4.2 OSHA Inspections

The Contractor shall immediately notify the Contracting Officer when an OSHA Compliance Official (Federal or State representative) presents credentials and informs the Contractor that the workplace will be inspected for OSHA compliance. The Contractor shall also notify the Contracting Officer upon determination that an exit interview will take place upon completion of the OSHA inspection.

3.5 MEASUREMENT AND PAYMENT

No separate measurement or payment will be made for the work specified in this section and all costs in connection therewith shall be included in the costs of all the bid items.

-- End of Section --

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SECTION 01312

QUALITY CONTROL SYSTEM (QCS)

PART 1 GENERAL

1.1 SCOPE OF SECTION

The Government will use the Resident Management System for Windows (RMS) to assist in its monitoring and administration of this contract. The Contractor shall use the Government-furnished Construction Contractor Module of RMS, referred to as QCS, to record, maintain, and submit various information throughout the contract period. The Contractor module, user manuals, updates, and training information can be downloaded from the RMS web site (http://155.80.93.251/). This joint Government-Contractor use of RMS and QCS will facilitate electronic exchange of information and overall management of the contract. QCS provides the means for the Contractor to input, track, and electronically share information with the Government in the following areas:

Administration
Finances
Quality Control
Submittal Monitoring
Scheduling
Import/Export of Data

1.1.1 Correspondence and Electronic Communications

For ease and speed of communications, both Government and Contractor will, to the maximum extent feasible, exchange correspondence and other documents in electronic format. Correspondence, pay requests and other documents comprising the official contract record shall also be provided in paper format, with signatures and dates where necessary. Paper documents will govern, in the event of discrepancy with the electronic version.

1.1.2 Other Factors

Particular attention is directed to Contract Clause, "Schedules for Construction Contracts", Contract Clause, "Payments", Section 01325, PROJECT SCHEDULE, Section 01330, SUBMITTAL PROCEDURES, and Section 01450, CONTRACTOR QUALITY CONTROL, which have a direct relationship to the reporting to be accomplished through QCS. Also, there is no separate payment for establishing and maintaining the QCS database; all costs associated therewith shall be included in the contract pricing for the work.

1.2 QCS SOFTWARE

QCS is a Windows-based program that can be run on a stand-alone personal computer or on a network. The Government will make available the QCS

software to the Contractor after award of the construction contract. Prior to the Pre-Construction Conference, the Contractor shall be responsible to download, install and use the latest version of the QCS software from the Government's RMS Internet Website. Upon specific justification and request by the Contractor, the Government can provide QCS on 3-1/2 inch high-density diskettes or CD-ROM. Any program updates of QCS will be made available to the Contractor via the Government RMS Website as they become available.

1.3 SYSTEM REQUIREMENTS

The following listed hardware and software is the minimum system configuration that the Contractor shall have to run QCS:

Hardware

IBM-compatible PC with 500 MHz Pentium or higher processor

128+ MB RAM for workstation / 256+ MB RAM for server

1 GB hard drive disk space for sole use by the QCS system

3 1/2 inch high-density floppy drive

Compact disk (CD) Reader, 8x speed or higher

SVGA or higher resolution monitor (1024 x 768, 256 colors)

Mouse or other pointing devise

Windows compatible printer (Laser printer must have 4+ MB of RAM)

Connection to the Internet, minimum 56 BPS

Software

MS Windows 98, ME, NT, or 2000

Word Processing software compatible with MS Word 97 or newer

Latest version of : Netscape Navigator, Microsoft Internet Explorer, or other browser that supports HTML 4.0 or higher

Electronic mail (E-mail), MAPI compatible

Virus protection software that is regularly upgraded with all issued manufacturer's updates

1.4 RELATED INFORMATION

1.4.1 QCS User Guide

After contract award, the Contractor shall download instructions for the installation and use of QCS from the Government RMS Internet Website; the

Contractor can obtain the current address from the Government. In case of justifiable difficulties, the Government will provide the Contractor with a CD-ROM containing these instructions.

1.4.2 Contractor Quality Control(CQC) Training

The use of QCS will be discussed with the Contractor's QC System Manager during the mandatory CQC Training class.

1.5 CONTRACT DATABASE

Prior to the pre-construction conference, the Government shall provide the Contractor with basic contract award data to use for QCS. The Government will provide data updates to the Contractor as needed, generally by files attached to E-mail. These updates will generally consist of submittal reviews, correspondence status, QA comments, and other administrative and QA data.

1.6 DATABASE MAINTENANCE

The Contractor shall establish, maintain, and update data for the contract in the QCS database throughout the duration of the contract. The Contractor shall establish and maintain the QCS database at the Contractor's site office. Data updates to the Government shall be submitted by E-mail with file attachments, e.g., daily reports, schedule updates, payment requests. If permitted by the Contracting Officer, a data diskette or CD-ROM may be used instead of E-mail (see Paragraph DATA SUBMISSION VIA COMPUTER DISKETTE OR CD-ROM). The QCS database typically shall include current data on the following items:

1.6.1 Administration

1.6.1.1 Contractor Information

The database shall contain the Contractor's name, address, telephone numbers, management staff, and other required items. Within 14 calendar days of receipt of QCS software from the Government, the Contractor shall deliver Contractor administrative data in electronic format via E-mail.

1.6.1.2 Subcontractor Information

The database shall contain the name, trade, address, phone numbers, and other required information for all subcontractors. A subcontractor must be listed separately for each trade to be performed. Each subcontractor/trade shall be assigned a unique Responsibility Code, provided in QCS. Within 14 calendar days of receipt of QCS software from the Government, the Contractor shall deliver subcontractor administrative data in electronic format via E-mail.

1.6.1.3 Correspondence

All Contractor correspondence to the Government shall be identified with a serial number. Correspondence initiated by the Contractor's site office shall be prefixed with "S". Letters initiated by the Contractor's home

(main) office shall be prefixed with "H". Letters shall be numbered starting from 0001. (e.g., H-0001 or S-0001). The Government's letters to the Contractor will be prefixed with "C".

1.6.1.4 Equipment

The Contractor's QCS database shall contain a current list of equipment planned for use or being used on the jobsite, including the most recent and planned equipment inspection dates.

1.6.1.5 Management Reporting

QCS includes a number of reports that Contractor management can use to track the status of the project. The value of these reports is reflective of the quality of the data input, and is maintained in the various sections of QCS. Among these reports are: Progress Payment Request worksheet, QA/QC comments, Submittal Register Status, Three-Phase Inspection checklists.

1.6.2 Finances

1.6.2.1 Pay Activity Data

The QCS database shall include a list of pay activities that the Contractor shall develop in conjunction with the construction schedule. The sum of all pay activities shall be equal to the total contract amount, including modifications. Pay activities shall be grouped by Contract Line Item Number (CLIN), and the sum of the activities shall equal the amount of each CLIN. The total of all CLINs equals the Contract Amount.

1.6.2.2 Payment Requests

All progress payment requests shall be prepared using QCS. The Contractor shall complete the payment request worksheet and include it with the payment request. The work completed under the contract, measured as percent or as specific quantities, shall be updated at least monthly. After the update, the Contractor shall generate a payment request report using QCS. The Contractor shall submit the payment requests with supporting data by E-mail with file attachment(s). If permitted by the Contracting Officer, a data diskette may be used instead of E-mail. A signed paper copy of the approved payment request is also required, which shall govern in the event of discrepancy with the electronic version.

1.6.3 Quality Control (QC)

QCS provides a means to track implementation of the 3-phase QC Control System, prepare daily reports, identify and track deficiencies, document progress of work, and support other contractor QC requirements. The Contractor shall maintain this data on a daily basis. Entered data will automatically output to the QCS generated daily report. The Contractor shall provide the Government a Contractor Quality Control (CQC) Plan within the time required in Section 01450, CONTRACTOR QUALITY CONTROL. Within seven calendar days of Government acceptance, the Contractor shall submit a data diskette or CD-ROM reflecting the information contained in the accepted CQC Plan: schedule, pay activities, features of work, submittal

register, QC requirements, and equipment list.

1.6.3.1 Daily Contractor Quality Control (CQC) Reports.

QCS includes the means to produce the Daily CQC Report. The Contractor may use other formats to record basic QC data. However, the Daily CQC Report generated by QCS shall be the Contractor's official report. Data from any supplemental reports by the Contractor shall be summarized and consolidated onto the QCS-generated Daily CQC Report. Daily CQC Reports shall be submitted as required by Section 01450, CONTRACTOR QUALITY CONTROL. Reports shall be submitted electronically to the Government using E-mail or diskette within 24 hours after the date covered by the report. Use of either mode of submittal shall be coordinated with the Government representative. The Contractor shall also provide the Government a signed, printed copy of the daily CQC report.

1.6.3.2 Deficiency Tracking.

The Contractor shall use QCS to track deficiencies. Deficiencies identified by the Contractor will be numerically tracked using QC punch list items. The Contractor shall maintain a current log of its QC punch list items in the QCS database. The Government will log the deficiencies it has identified using its QA punch list items. The Government's QA punch list items will be included in its export file to the Contractor. The Contractor shall regularly update the correction status of both QC and QA punch list items.

1.6.3.3 Three-Phase Control Meetings

The Contractor shall maintain scheduled and actual dates and times of preparatory and initial control meetings in QCS.

1.6.3.4 Accident/Safety Tracking.

The Government will issue safety comments, directions, or guidance whenever safety deficiencies are observed. The Government's safety comments will be included in its export file to the Contractor. The Contractor shall regularly update the correction status of the safety comments. In addition, the Contractor shall utilize QCS to advise the Government of any accidents occurring on the jobsite. This brief supplemental entry is not to be considered as a substitute for completion of mandatory reports, e.g., ENG Form 3394 and OSHA Form 200.

1.6.3.5 Features of Work

The Contractor shall include a complete list of the features of work in the QCS database. A feature of work may be associated with multiple pay activities. However, each pay activity (see subparagraph "Pay Activity Data" of paragraph "Finances") will only be linked to a single feature of work.

1.6.3.6 QC Requirements

The Contractor shall develop and maintain a complete list of QC testing,

transferred and installed property, and user training requirements in QCS. The Contractor shall update all data on these QC requirements as work progresses, and shall promptly provide this information to the Government via QCS.

1.6.4 Submittal Management

The Government will provide the initial submittal register, ENG Form 4288, SUBMITTAL REGISTER, in electronic format. Thereafter, the Contractor shall maintain a complete list of all submittals, including completion of all data columns. Dates on which submittals are received and returned by the Government will be included in its export file to the Contractor. The Contractor shall use QCS to track and transmit all submittals. ENG Form 4025, submittal transmittal form, and the submittal register update, ENG Form 4288, shall be produced using QCS. RMS will be used to update, store and exchange submittal registers and transmittals, but will not be used for storage of actual submittals.

1.6.5 Schedule

The Contractor shall develop a construction schedule consisting of pay activities, in accordance with Contract Clause "Schedules for Construction Contracts", or Section 01320, PROJECT SCHEDULE, as applicable. This schedule shall be input and maintained in the QCS database either manually or by using the Standard Data Exchange Format (SDEF) (see Section 01320 PROJECT SCHEDULE). The updated schedule data shall be included with each pay request submitted by the Contractor.

1.6.6 Import/Export of Data

QCS includes the ability to export Contractor data to the Government and to import submittal register and other Government-provided data, and schedule data using SDEF.

1.7 IMPLEMENTATION

Contractor use of QCS as described in the preceding paragraphs is mandatory. The Contractor shall ensure that sufficient resources are available to maintain its QCS database, and to provide the Government with regular database updates. QCS shall be an integral part of the Contractor's management of quality control.

1.8 DATA SUBMISSION VIA COMPUTER DISKETTE OR CD-ROM

The Government-preferred method for Contractor's submission of updates, payment requests, correspondence and other data is by E-mail with file attachment(s). For locations where this is not feasible, the Contracting Officer may permit use of computer diskettes or CD-ROM for data transfer. Data on the disks or CDs shall be exported using the QCS built-in export function. If used, diskettes and CD-ROMs will be submitted in accordance with the following:

1.8.1 File Medium

The Contractor shall submit required data on 3-1/2 inch double-sided high-density diskettes formatted to hold 1.44 MB of data, capable of running under Microsoft Windows 95 or newer. Alternatively, CD-ROMs may be used. They shall conform to industry standards used in the United States. All data shall be provided in English.

1.8.2 Disk or CD-ROM Labels

The Contractor shall affix a permanent exterior label to each diskette and CD-ROM submitted. The label shall indicate in English, the QCS file name, full contract number, contract name, project location, data date, name and telephone number of person responsible for the data.

1.8.3 File Names

The Government will provide the file names to be used by the Contractor with the QCS software.

1.9 MONTHLY COORDINATION MEETING

The Contractor shall update the QCS database each workday. At least monthly, the Contractor shall generate and submit an export file to the Government with schedule update and progress payment request. As required in Contract Clause "Payments", at least one week prior to submittal, the Contractor shall meet with the Government representative to review the planned progress payment data submission for errors and omissions. The Contractor shall make all required corrections prior to Government acceptance of the export file and progress payment request. Payment requests accompanied by incomplete or incorrect data submittals will be returned. The Government will not process progress payments until an acceptable QCS export file is received.

1.10 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the requirements of this specification. 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.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.1 MEASUREMENT AND PAYMENT

No separate measurement or payment will be made for the work specified in this section and all costs in connection therewith shall be included in the costs of all the bid items.

-- End of Section --

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SECTION 01320

CONSTRUCTION PHOTOGRAPHY: WITH VIDEO

PART 1 GENERAL

1.1 SCOPE OF SECTION

The work specified in this section includes construction photographs consisting of prints, digital image files, and videography showing the pre-construction condition, post-construction condition, progress of work during the contract period, work methods, and equipment utilized.

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-07 Certificates

Photography Plan; G DO.

The Contractor shall submit, for approval, each month, his photography plan, which shall include the following information: items to be photographed and videotaped, locations, and the time the images are to be taken.

Pre-Construction Photographs; G COR.

Pre-Construction photographs, digital images, and video shall be furnished to the Government within 10 calendar days of when they are taken. They shall be taken as close as possible to the beginning of the construction work. The Contractor shall provide 3-inch, 3-ring binders and plastic photo-holder pages which shall hold the size of photos submitted. The Contractor shall submit the digital images on a CD. The Contractor shall submit the videography on a VHS tape.

Construction Photographs; G COR.

Construction photographs, digital images, and video shall be furnished to the Government within 10 days of when they are taken throughout the contract period. The photos shall be submitted in plastic photo-holder pages as described above. The digital images shall be submitted on a CD. The Contractor shall submit the videography on a VHS tape.

Post-Construction Photographs; G COR.

Post-Construction photographs, digital images, and video shall be furnished to the Government within 10 calendar days of when they are taken. They shall be taken immediately after the end of the construction work. The photos shall be submitted in plastic photo-holder pages as described above. The digital images shall be submitted on a CD. The Contractor shall submit the videography on a VHS tape.

One set (of the required seven copies) of photographs, videotape, and digital images, and identification information of the above required photographs, shall be sent to the Philadelphia District Office at the following address:

U.S. Army Corps of Engineers
Philadelphia District
Design Branch (CENAP-EC-DC)
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107-3390

One additional set of digital images, and identification information of the images, shall be sent to the Philadelphia District Office's Technical Library, at the following address:

U.S. Army Corps of Engineers
Philadelphia District
Technical Library (CENAP-IM)
ATTN: Ms. L. Skale
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107-3390

1.3 QUALITY ASSURANCE

All photography shall be performed by a qualified, established commercial photographer.

1.4 GENERAL REQUIREMENTS

1.4.1 Prints

Prints shall be 8" x 10", color, on single weight paper with smooth surface, glossy finish. Identification information on back of each print shall include: name and location of project, item/action being photographed, General Contractor, orientation of view, date and time of exposure, and name and address of photographer.

1.4.2 Digital Images

Digital images shall be taken with a high quality digital camera using a minimum of 3,000,000 pixels. Images shall be identified by number and referenced to a printed listing containing the same identification information as used for the prints. The digital images shall be furnished on compact disc (CD).

1.4.3 Videography

Video shall be taken using a high quality video camera which displays the date and time. The video shall be furnished on a VHS tape capable of playing in a standard VCR.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 PHOTOGRAPHY

A minimum of 10 photographs shall be taken for each of the following: pre-construction, during each definable feature of work, and post-construction. The Contractor shall submit color prints and accompanying digital images showing the work methods, equipment utilized, and the progress of work at the following times during the contract period:

a. Prior to commencement of work the Contractor shall photograph the existing conditions of the work site including all bulkheads, groins, and structures. In addition, structures adjacent to the beach/work areas shall also be photographed to document the existing conditions.

b. During the progress of the work, such as at the start and completion of the definable features of work. NOTE: All photography for documenting the "progress of work" shall be of actual, working personnel and equipment, depicting the work methods being utilized, taken during normal working hours.

c. After completion of the work the Contractor shall photograph the site from the same locations used to determine the existing conditions prior to construction.

d. Special events throughout the contract period as directed by the Contracting Officer's Representative.

3.1.1 Photographic Documentation of Surveys

During the completion of pre-construction surveys, digital color photographs shall be taken at each profile line to provide visual documentation of the beach. The digital photographs shall be taken from a point on the profile line located approximately halfway between the water line and the dune (or survey baseline in the absence of a dune). The photographs shall be taken in three directions. The first shall be taken facing perpendicular to the profile line azimuth. The direction of the photographs shall be defined by facing the ocean while standing on the beach profile and turning counterclockwise approximately 90 degrees (generally facing a northerly or easterly direction along the coast of New Jersey). The second shall be taken parallel to the profile azimuth and facing seaward. The third shall be taken parallel to the profile azimuth and facing landward. Any obstructions along the survey line azimuth which preclude collection of profile data shall be documented with additional digital photographs. Digital files and a set of hardcopy images shall be

provided to the Government in a brief report documenting the surveys, weather conditions, beach conditions and field notes.

3.2 VIDEOGRAPHY

A minimum of 2 hours of video shall be taken during each phase of the contract period (Pre-Construction, Construction, Post-Construction). Video taping shall be performed to provide an accurate and detailed description of construction equipment and methods utilized for the contract work. NOTE: All video for documenting the "progress of work" shall be of actual, working personnel and equipment, depicting the work methods being utilized, taken during normal working hours.

a. Video taping shall be performed with a government representative.

b. Video taping work shall be performed, with adequate lighting to ensure a clear visual record.

c. The time and date shall be continuously displayed on the videotape.

d. Videotapes of different facilities shall be preceded by a minimum of a ten second written description of the item video taped including the specific item and location video taped, the date and time of the video taping, and the name of the contractor and videographer.

e. Prior to commencement of work, the Contractor shall videotape the existing conditions as specified above for before-construction photographs. In addition, the Contractor shall videotape the existing conditions of all beach/work areas, landward and oceanward of the baseline.

3.3 MEASUREMENT AND PAYMENT

No separate measurement or payment will be made for the work specified in this section and all costs in connection therewith shall be included in the the cost of all the bid items.

-- End of Section --

SECTION 01325

PROJECT SCHEDULE

PART 1 GENERAL

1.1 SCOPE OF SECTION

The work specified in this section consists of the preparation of a project schedule.

1.2 REFERENCES

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

U.S. ARMY CORPS OF ENGINEERS (USACE)

ER 1-1-11	(1995) Progress, Schedules, and Network Analysis Systems

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-07 Certificates

Preliminary Project Schedule; G,DO.

A preliminary project schedule defining the Contractor's planned operations during the first 30 calendar days shall be submitted within 10 days after receipt by the Contractor of the notice to proceed. The Contractor's general plan for the balance of the contract period shall be indicated. Cost of activities expected to be completed or partially completed before submission and approval of the final schedule shall be included.

Final Project Schedule; G,DO.

The complete final project schedule consisting of the detailed analyses (on-site manpower loading schedule and equipment schedule) and flow charts shall be submitted within 60 calendar days after receipt by the Contractor of the notice to proceed.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

Pursuant to the Contract Clause, SCHEDULE FOR CONSTRUCTION CONTRACTS, a Project Schedule as described below shall be prepared. The scheduling of construction shall be the responsibility of the Contractor. Contractor management personnel shall actively participate in its development. Subcontractors and suppliers working on the project shall also contribute in developing and maintaining an accurate Project Schedule. The approved Project Schedule shall be used to measure the progress of the work, to aid in evaluating time extensions, and to provide the basis of all progress payments.

3.2 BASIS FOR PAYMENT

The schedule shall be the basis for measuring Contractor progress. Lack of an approved schedule or scheduling personnel will result in an inability of the Contracting Officer to evaluate Contractor's progress for the purposes of payment. Failure of the Contractor to provide all information, as specified below, shall result in the disapproval of the entire Project Schedule submission and the inability of the Contracting Officer to evaluate Contractor progress for payment purposes. In the case where Project Schedule revisions have been directed by the Contracting Officer and those revisions have not been included in the Project Schedule, the Contracting Officer may hold retainage up to the maximum allowed by contract, each payment period, until revisions to the Project Schedule have been made.

3.3 PROJECT SCHEDULE

The computer software system utilized by the Contractor to produce the Project Schedule shall be capable of providing all requirements of this specification. Failure of the Contractor to meet the requirements of this specification shall result in the disapproval of the schedule. Manual methods used to produce any required information shall require approval by the Contracting Officer.

3.3.1 Use of the Critical Path Method

The Critical Path Method (CPM) of network calculation shall be used to generate the Project Schedule. The Contractor shall provide the Project Schedule in the Precedence Diagram Method (PDM).

3.3.2 Level of Detail Required

The Project Schedule shall include an appropriate level of detail. Failure to develop or update the Project Schedule or provide data to the Contracting Officer at the appropriate level of detail, as specified by the Contracting Officer, shall result in the disapproval of the schedule. The

Contracting Officer will use, but is not limited to, the following conditions to determine the appropriate level of detail to be used in the Project Schedule:

3.3.2.1 Activity Durations

Contractor submissions shall follow the direction of the Contracting Officer regarding reasonable activity durations. Reasonable durations are those that allow the progress of activities to be accurately determined between payment periods (usually less than 2 percent of all non-procurement activities' Original Durations are greater than 20 days).

3.3.2.2 Procurement Activities

Tasks related to the procurement of long lead materials or equipment shall be included as separate activities in the project schedule. Long lead materials and equipment are those materials that have a procurement cycle of over 90 days. Examples of procurement process activities include, but are not limited to: submittals, approvals, procurement, fabrication, and delivery.

3.3.2.3 Critical Activities

The following activities shall be listed as separate line activities on the Contractor's project schedule:

a. Submission and approval of as-built drawings.

b. Prefinal inspection.

c. Correction of punchlist from prefinal inspection.

d. Final inspection.

3.3.2.4 Government Activities

Government and other agency activities that could impact progress shall be shown.

3.3.2.5 Responsibility

All activities shall be identified in the project schedule by the party responsible to perform the work. Responsibility includes, but is not limited to, the subcontracting firm, contractor work force, or government agency performing a given task. Activities shall not belong to more than one responsible party. The responsible party for each activity shall be identified by the Responsibility Code.

3.3.2.6 Work Areas

All activities shall be identified in the project schedule by the work area in which the activity occurs. Activities shall not be allowed to cover more than one work area. The work area of each activity shall be identified by the Work Area Code.

3.3.2.7 Modification or Claim Number

Any activity that is added or changed by contract modification or used to justify claimed time shall be identified by a mod or claim code that changed the activity. Activities shall not belong to more than one modification or claim item. The modification or claim number of each activity shall be identified by the Mod or Claim Number. Whenever possible, changes shall be added to the schedule by adding new activities. Existing activities shall not normally be changed to reflect modifications.

3.3.2.8 Bid Item

All activities shall be identified in the project schedule by the Bid Item to which the activity belongs. An activity shall not contain work in more than one bid item. The bid item for each appropriate activity shall be identified by the Bid Item Code.

3.3.2.9 Phase of Work

All activities shall be identified in the project schedule by the phases of work in which the activity occurs. Activities shall not contain work in more than one phase of work. The project phase of each activity shall be by the unique Phase of Work Code.

3.3.2.10 Category of Work

All Activities shall be identified in the project schedule according to the category of work which best describes the activity. Category of work refers, but is not limited, to the procurement chain of activities including such items as submittals, approvals, procurement, fabrication, delivery, installation, start-up, and testing. The category of work for each activity shall be identified by the Category of Work Code.

3.3.2.11 Feature of Work

All activities shall be identified in the project schedule according to the feature of work to which the activity belongs. Feature of work refers, but is not limited to, a work breakdown structure for the project. The feature of work for each activity shall be identified by the Feature of Work Code.

3.3.3 Scheduled Project Completion

The schedule interval shall extend from NTP to the contract completion date.

3.3.3.1 Project Start Date

The schedule shall start no earlier than the date on which the NTP was acknowledged. The Contractor shall include as the first activity in the project schedule an activity called "Start Project". The "Start Project" activity shall have an "ES" constraint date equal to the date that the NTP was acknowledged, and a zero day duration.

3.3.3.2 Constraint of Last Activity

Completion of the last activity in the schedule shall be constrained by the contract completion date. Calculation on project updates shall be such that if the early finish of the last activity falls after the contract completion date, then the float calculation shall reflect a negative float on the critical path. The Contractor shall include as the last activity in the project schedule an activity called "End Project". The "End Project" activity shall have an "LF" constraint date equal to the completion date for the project, and a zero day duration.

3.3.3.3 Early Project Completion

In the event the project schedule shows completion of the project prior to the contract completion date, the Contractor shall identify those activities that have been accelerated and/or those activities that are scheduled in parallel to support the Contractor's "early" completion. Contractor shall specifically address each of the activities noted in the narrative report at every project schedule update period to assist the Contracting Officer in evaluating the Contractor's ability to actually complete prior to the contract period.

3.3.4 Interim Completion Dates

Contractually specified interim completion dates shall also be constrained to show negative float if the early finish date of the last activity in that phase falls after the interim completion date.

3.3.4.1 Start Phase

The Contractor shall include as the first activity for a project phase an activity called "Start Phase X" where "X" refers to the phase of work. The "Start Phase X" activity shall have an "ES" constraint date equal to the date on which the NTP was acknowledged, and a zero day duration.

3.3.4.2 End Phase

The Contractor shall include as the last activity in a project phase an activity called "End Phase X" where "X" refers to the phase of work. The "End Phase X" activity shall have an "LF" constraint date equal to the completion date for the project, and a zero day duration.

3.3.4.3 Phase X

The Contractor shall include a hammock type activity for each project phase called "Phase X" where "X" refers to the phase of work. The "Phase X" activity shall be logically tied to the earliest and latest activities in the phase.

3.3.5 Default Progress Data Disallowed

Actual Start and Finish dates shall not be automatically updated by default mechanisms that may be included in CPM scheduling software systems. Actual Start and Finish dates on the CPM schedule shall match those dates provided

from Contractor Quality Control Reports. Failure of the Contractor to document the Actual Start and Finish dates on the Daily Quality Control report for every in-progress or completed activity, and failure to ensure that the data contained on the Daily Quality Control reports is the sole basis for schedule updating shall result in the disapproval of the Contractor's schedule and the inability of the Contracting Officer to evaluate Contractor progress for payment purposes. Updating of the percent complete and the remaining duration of any activity shall be independent functions. Program features which calculate one of these parameters from the other shall be disabled.

3.3.6 Out-of-Sequence Progress

Activities that have posted progress without all preceding logic being satisfied (Out-of-Sequence Progress) will be allowed only on a case-by-case approval of the Contracting Officer. The Contractor shall propose logic corrections to eliminate all out of sequence progress or justify not changing the sequencing for approval prior to submitting an updated project schedule.

3.3.7 Negative Lags

Lag durations contained in the project schedule shall not have a negative value.

3.4 PROJECT SCHEDULE SUBMISSIONS

The Contractor shall provide the submissions as described below. The data disk, reports, and network diagrams required for each submission are contained in paragraph SUBMISSION REQUIREMENTS.

3.4.1 Preliminary Project Schedule Submission

The Preliminary Project Schedule, defining the Contractor's planned operations for the first 60 calendar days shall be submitted for approval within 15 calendar days after the NTP is acknowledged. The approved preliminary schedule shall be used for payment purposes not to exceed 60 calendar days after NTP.

3.4.2 Initial Project Schedule Submission

The Initial Project Schedule shall be submitted for approval within 30 calendar days after NTP. The schedule shall provide a reasonable sequence of activities which represent work through the entire project and shall be at a reasonable level of detail.

3.4.3 Periodic Schedule Updates

Based on the result of progress meetings, specified in "Periodic Progress Meetings," the Contractor shall submit periodic schedule updates. These submissions shall enable the Contracting Officer to assess Contractor's progress. If the Contractor fails or refuses to furnish the information and project schedule data, which in the judgement of the Contracting Officer or authorized representative is necessary for verifying the

Contractor's progress, the Contractor shall be deemed not to have provided an estimate upon which progress payment may be made.

3.4.4 Standard Activity Coding Dictionary

The Contractor shall use the activity coding structure defined in the Standard Data Exchange Format (SDEF) in ER 1-1-11, Appendix A. This exact structure is mandatory, even if some fields are not used.

3.5 SUBMISSION REQUIREMENTS

The following items shall be submitted by the Contractor for the initial submission, and every periodic project schedule update throughout the life of the project:

3.5.1 Data Disks

Two data disks containing the project schedule shall be provided. Data on the disks shall adhere to the SDEF format specified in ER 1-1-11, Appendix A.

3.5.1.1 File Medium

Required data shall be submitted on 3.5 disks, formatted to hold 1.44 MB of data, under the MS-DOS Version 5. or 6.x, unless otherwise approved by the Contracting Officer.

3.5.1.2 Disk Label

A permanent exterior label shall be affixed to each disk submitted. The label shall indicate the type of schedule (Initial, Update, or Change), full contract number, project name, project location, data date, name and telephone number or person responsible for the schedule, and the MS-DOS version used to format the disk.

3.5.1.3 File Name

Each file submitted shall have a name related to either the schedule data date, project name, or contract number. The Contractor shall develop a naming convention that will ensure that the names of the files submitted are unique. The Contractor shall submit the file naming convention to the Contracting Officer for approval.

3.5.2 Narrative Report

A Narrative Report shall be provided with the initial, and each update of the project schedule. This report shall be provided as the basis of the Contractor's progress payment request. The Narrative Report shall include: a description of activities along the 2 most critical paths, a description of current and anticipated problem areas or delaying factors and their impact, and an explanation of corrective actions taken or required to be taken. The narrative report is expected to relay to the Government, the Contractor's thorough analysis of the schedule output and its plans to compensate for any problems, either current or potential, which are

revealed through that analysis.

3.5.3 Approved Changes Verification

Only project schedule changes that have been previously approved by the Contracting Officer shall be included in the schedule submission. The Narrative Report shall specifically reference, on an activity by activity basis, all changes made since the previous period and relate each change to documented, approved schedule changes.

3.5.4 Schedule Reports

The format for each activity for the schedule reports listed below shall contain: Activity Numbers, Activity Description, Original Duration, Remaining Duration, Early Start Date, Early Finish Date, Late Start Date, Late Finish Date, Total Float. Actual Start and Actual Finish Dates shall be printed for those activities in progress or completed.

3.5.4.1 Activity Report

A list of all activities sorted according to activity number.

3.5.4.2 Logic Report

A list of Preceding and Succeeding activities for every activity in ascending order by activity number. Preceeding and succeeding activities shall include all information listed above in paragraph Schedule Reports. A blank line shall be left between each activity grouping.

3.5.4.3 Total Float Report

A list of all incomplete activities sorted in ascending order of total float. Activities which have the same amount of total float shall be listed in ascending order of Early Start Dates. Completed activities shall not be shown on this report.

3.5.4.4 Earnings Report

A compilation of the Contractor's Total Earnings on the project from the NTP until the most recent Monthly Progress Meeting. This report shall reflect the Earnings of specific activities based on the agreements made in the field and approved between the Contractor and Contracting Officer at the most recent Monthly Progress Meeting. Provided that the Contractor has provided a complete schedule update, this report shall serve as the basis of determining Contractor Payment. Activities shall be grouped by bid item and sorted by activity numbers. This report shall: sum all activities in a bid item and provide a bid item percent; and complete and sum all bid items to provide a total project percent complete. The printed report shall contain, for each activity: the Activity Number, Activity Description, Original Budgeted Amount, Total Quantity, Quantity to Date, Percent Complete (based on cost), and Earnings to Date.

3.5.5 Network Diagram

The network diagram shall be required on the initial schedule submission and on monthly schedule update submissions. The network diagram shall depict and display the order and interdependence of activities and the sequence in which the work is to be accomplished. The Contracting Officer will use, but is not limited to, the following conditions to review compliance with this paragraph:

3.5.5.1 Continuous Flow

Diagrams shall show a continuous flow from left to right with no arrows from right to left. The activity number, description, duration, and estimated earned value shall be shown on the diagram.

3.5.5.2 Project Milestone Dates

Dates shall be shown on the diagram for start of project, any contract required interim completion dates, and contract completion dates.

3.5.5.3 Critical Path

The critical path shall be clearly shown.

3.5.5.4 Banding

Activities shall be grouped to assist in the understanding of the activity sequence. Typically, this flow will group activities by category of work, work area and/or responsibility.

3.5.5.5 S-Curves

Earnings curves showing projected early and late earnings and earnings to date.

3.6 PERIODIC PROGRESS MEETINGS

Progress meetings to discuss payment shall include a monthly onsite meeting or other regular intervals mutually agreed to at the preconstruction conference. During this meeting the Contractor shall describe, on an activity by activity basis, all proposed revisions and adjustments to the project schedule required to reflect the current status of the project. The Contractor shall be responsible for recording and distributing minutes of these meetings. The Contracting Officer will approve activity progress, proposed revisions, and adjustments as appropriate.

3.6.1 Meeting Attendance

The Contractor's Project Manager and Scheduler shall attend the regular progress meeting.

3.6.2 Update Submission Following Progress Meeting

A complete update of the project schedule containing all approved progress,

revisions, and adjustments, based on the regular progress meeting, shall be submitted not later than 4 working days after the monthly progress meeting.

3.6.3 Progress Meeting Contents

Update information, including Actual Start Dates, Actual Finish Dates, Remaining Durations, and Cost-to-Date shall be subject to the approval of the Contracting Officer. As a minimum, the Contractor shall address the following items on an activity by activity basis during each progress meeting.

3.6.3.1 Start and Finish Dates

The Actual Start and Actual Finish dates for each activity currently in-progress or completed .

3.6.3.2 Time Completion

The estimated Remaining Duration for each activity in-progress. Time-based progress calculations shall be based on Remaining Duration for each activity.

3.6.3.3 Cost Completion

The earnings for each activity started. Payment will be based on earnings for each in-progress or completed activity. Payment for individual activities will not be made for work that contains quality defects. A portion of the overall project amount may be retained based on delays of activities.

3.6.3.4 Logic Changes

All logic changes pertaining to NTP on change orders, change orders to be incorporated into the schedule, contractor proposed changes in work sequence, corrections to schedule logic for out-of-sequence progress, lag durations, and other changes that have been made pursuant to contract provisions shall be specifically identified and discussed.

3.6.3.5 Other Changes

Other changes required due to delays in completion of any activity or group of activities include: 1) delays beyond the Contractor's control, such as strikes and unusual weather. 2) delays encountered due to submittals, Government Activities, deliveries or work stoppages which make re-planning the work necessary. 3) Changes required to correct a schedule which does not represent the actual or planned prosecution and progress of the work.

3.7 REQUESTS FOR TIME EXTENSIONS

In the event the Contractor requests an extension of the contract completion date, or any interim milestone date, the Contractor shall furnish the following for a determination as to whether or not the Contractor is entitled to an extension of time under the provisions of the contract: justification, project schedule data, and supporting evidence as

the Contracting Officer may deem necessary. Submission of proof of delay, based on revised activity logic, duration, and costs (updated to the specific date that the delay occurred) is obligatory to any approvals.

3.7.1 Justification of Delay

The project schedule shall clearly display that the Contractor has used, in full, all the float time available for the work involved with this request. The Contracting Officer's determination as to the number of allowable days of contract extension shall be based upon the project schedule updates in effect for the time period in question, and other factual information. Actual delays that are found to be caused by the Contractor's own actions, which result in the extension of the schedule, will not be a cause for a time extension to the contract completion date.

3.7.2 Submission Requirements

The Contractor shall submit a justification for each request for a change in the contract completion date of under 2 weeks based upon the most recent schedule update at the time of the NTP or constructive direction issued for the change. Such a request shall be in accordance with the requirements of other appropriate Contract Clauses and shall include, as a minimum:

a. A list of affected activities, with their associated project schedule activity number.

b. A brief explanation of the causes of the change.

c. An analysis of the overall impact of the changes proposed.

d. A sub-network of the affected area.

Activities impacted in each justification for change shall be identified by a unique activity code contained in the required data file.

3.7.3 Additional Submission Requirements

For any requested time extension of over 2 weeks, the Contracting Officer may request an interim update with revised activities for a specific change request. The Contractor shall provide this disk within 4 days of the Contracting Officer's request.

3.8 DIRECTED CHANGES

If the NTP is issued for changes prior to settlement of price and/or time, the Contractor shall submit proposed schedule revisions to the Contracting Officer within 2 weeks of the NTP being issued. The proposed revisions to the schedule will be approved by the Contracting Officer prior to inclusion of those changes within the project schedule. If the Contractor fails to submit the proposed revisions, the Contracting Officer may furnish the Contractor with suggested revisions to the project schedule. The Contractor shall include these revisions in the project schedule until revisions are submitted, and final changes and impacts have been negotiated. If the Contractor has any objections to the revisions

furnished by the Contracting Officer, the Contractor shall advise the Contracting Officer within 2 weeks of receipt of the revisions. Regardless of the objections, the Contractor shall continue to update the schedule with the Contracting Officer's revisions until a mutual agreement in the revisions is reached. If the Contractor fails to submit alternative revisions within 2 weeks of receipt of the Contracting Officer's proposed revisions, the Contractor will be deemed to have concurred with the Contracting Officer's proposed revisions. The proposed revisions will then be the basis for an equitable adjustment for performance of the work.

3.9 OWNERSHIP OF FLOAT

Float available in the schedule, at any time, shall not be considered for the exclusive use of either the Government or the Contractor.

3.10 MEASUREMENT AND PAYMENT

No separate measurement or payment will be made for the work specified in this section and all costs in connection therewith shall be included in the costs of all the bid items.

-- End of Section --

SECTION 01330

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SCOPE OF SECTION

The work specified in this section includes the requirement to complete and maintain a submittal register and describes the procedures to be followed for the submission of submittals.

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-07 Certificates

Review and Complete Submittal Register (ENG Form 4288); G,COR.

Update Submittal Register (ENG Form 4288); G,COR.

1.3 SUBMITTAL IDENTIFICATION (SD)

Submittals required are identified by SD numbers and titles as follows:

SD-01 Preconstruction Submittals

SD-02 Shop Drawings

SD-03 Product Data

SD-04 Samples

SD-06 Test Reports

SD-07 Certificates

SD-11 Closeout Submittals

1.4 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

1.4.1 Government Approved

Government 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."

1.4.2 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.

1.5 APPROVED SUBMITTALS

The Contracting Officer's approval of submittals shall not be construed as a complete check, but will indicate only that the general method of construction, materials, detailing and other information are satisfactory. Approval will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor under the Contractor Quality Control (CQC) requirements of this contract is responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work. After submittals have been approved by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.6 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.

1.7 WITHHOLDING OF PAYMENT

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

1.8 GENERAL

The Contractor shall make submittals as required by the specifications. The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Units of weights and measures used on all submittals shall be the same as those used in the contract drawings. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Prior to submittal, all items shall be checked and approved by the Contractor's Quality Control (CQC) System Manager and each item shall be stamped, signed, and dated by the CQC System Manager indicating action taken. Proposed deviations from the contract requirements shall be clearly identified. Submittals requiring Government approval shall be scheduled and made prior to the acquisition of the material or equipment covered

thereby. Samples remaining upon completion of the work shall be picked up and disposed of in accordance with manufacturer's Material Safety Data Sheets (MSDS) and in compliance with existing laws and regulations.

1.9 SUBMITTAL REGISTER

At the end of this section is a submittal register showing items of equipment and materials for which submittals are required by the specifications; this list may not be all inclusive and additional submittals may be required. The Contractor shall maintain a submittal register for the project in accordance with Section 01312 QUALITY CONTROL SYSTEM (QCS). The Contractor shall update and submit the submittal register to the COR at least monthly. The Government will provide the initial submittal register in electronic format. Thereafter, the Contractor shall maintain a complete list of all submittals, including completion of all data columns. Dates on which submittals are received and returned by the Government will be included in its export file to the Contractor. The Contractor shall track all submittals.

1.10 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 14 calendar days exclusive of mailing time) shall be allowed and shown on the register for review and approval. No delay damages or time extensions will be allowed for time lost in late submittals.

1.11 TRANSMITTAL FORM (ENG FORM 4025)

The sample transmittal form (ENG Form 4025) attached to this section shall be used for submitting both Government approved and information only submittals in accordance with the instructions on the reverse side of the form. These forms are included in the QCS software that the Contractor is required to use for this contract. 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. The Action Code definitions on reverse side of ENG FORM 4025 shall be augmented as follows:

Code B - Approved, except as noted on the submittal and/or attached sheet. Contractor shall complete all noted actions and address all comments prior to proceeding with those items of work associated with and impacted by the noted actions/comments.

Code C - Conditionally approved, except as noted on the submittal and/or attached sheet. Resubmission and approval are required prior to proceeding with those items of work associated with and impacted by the noted actions/comments. The entire submittal, corrected to comply with the noted actions/comments, must be resubmitted

1.12 SUBMITTAL PROCEDURE

Paragraph (g) of Contract Clause: "Specifications and Drawings for Construction," is modified as specified herein. While submittals referred to in the text may use the wording "submitted to the Contracting Officer", submittals will be reviewed as indicated in column "f" of the Submittal Register (ENG Form 4288). Submittals shall be made as follows:

1.12.1 Submittals for Contracting Officer Representative (COR) Review and For Information Only (FIO)

The Contractor shall submit seven copies of submittals, on the submittal register indicated for Contracting Officer Representative (COR) approval, or, for information only (FIO), to the Contracting Officer Representative.

1.12.2 Submittals for District Office (DO) Review

The Contractor shall submit to the the District Office (DO), by the most expedient means, a total of seven copies of shop drawings and other submittals listed on the Submittal Register (ENG Form 4288) as requiring technical review by the DO. Six copies shall be submitted to the DO and one copy shall be submitted to the Contracting Officer Representative. The Contractor shall be responsible for all costs incurred in transmitting the required information for review in the submittal process.

DO mailing address:
US Army Corps of Engineers
Philadelphia District
Attn: CENAP-EC-CQ (DelFerro)
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107-3390

1.12.3 Deviations

For submittals which include proposed deviations requested by the Contractor, the column "variation" of ENG Form 4025 shall be checked. The Contractor shall set forth in writing the reason for any deviations and annotate such deviations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

1.12.4 Completion of Work

Upon completing the work under this contract, the Contractor shall furnish one set of prints of all shop drawings as finally approved. These drawings shall show all changes and revisions made up to the time the items covered by the shop drawings are completed and accepted."

1.13 CONTROL OF SUBMITTALS

The Contractor shall carefully control his procurement operations to ensure that each individual submittal is made on or before the Contractor scheduled submittal date shown on the approved "Submittal Register."

1.14 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. Three copies of the submittal will be retained by the Contracting Officer and the remaining copies of the submittal will be returned to the Contractor.

1.15 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.

1.16 STAMPS

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

CONTRACTOR

(Firm Name)

_____ Approved

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

SIGNATURE: _____

TITLE: _____

DATE: _____

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 MEASUREMENT AND PAYMENT

No separate measurement or payment will be made for the work specified in this section and all costs in connection therewith shall be included in the costs of all the bid items.

-- End of Section --

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE

(Read instructions on the reverse side prior to initiating this form)

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:
☐ THIS IS A NEW TRANSMITTAL
☐ THIS IS A RESUBMITTAL OF TRANSMITTAL _____

SPECIFICATION SEC. NO. *(Cover only one section with each transmittal)*

PROJECT TITLE AND LOCATION

CHECK ONE: THIS TRANSMITTAL IS FOR ☐ FIO ☐ GOV'T. APPROVAL

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

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.

NAME AND SIGNATURE OF CONTRACTOR

SECTION II - APPROVAL ACTION

ENCLOSURES RETURNED *(List by Item No.)*

NAME, TITLE AND SIGNATURE OF APPROVING AUTHORITY

DATE

ENG FORM 4025-R, MAR 95 (NAP01) *(ER 415-1-10)*

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.

B - Approved, except as noted on the submittal and/or attached sheet. Contractor shall complete all noted actions and address all comments prior to proceeding with those items of work associated with and impacted by the noted actions/comments.

C - Conditionally approved, except as noted on the submittal and/or attached sheet. Resubmission and approval are required prior to proceeding with those items of work associated with and impacted by the noted actions/comments. The entire submittal, corrected to comply with noted actions/comments, must be resubmitted.

D - Will be returned by separate correspondence.

E - Disapproved (See attached).

F - Receipt acknowledged.

FX - Receipt acknowledged, does not comply as noted with contract requirements.

G - Other *(Specify)*

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

(Reverse of ENG Form 4025-R)

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
Beach Nourishment, Cape May Inlet to Lower Township, Cape May, NJ

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAG# PARAGRAPH	CLASSIFICATION	GOVT OR A/E REVWR	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION			APPROVING AUTHORITY				MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
							SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)		(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		00700	SD-01 Preconstruction Submittals															
			Payroll Basic Records &		G COR													
			Statements of Compliance															
			Affirmative Action Compliance		G COR													
			Plan															
			SD-07 Certificates															
			Certificate of Insurance		G COR													
		00800	SD-01 Preconstruction Submittals															
			Copy of Request to USCG for		FIO													
			Notice to Mariners															
			Copy of Request to USCG for		FIO													
			Movement of Navigation Aids															
			Copy of Request to USCG for		FIO													
			Placing Submerged Pipelines															
			Across Channel															
		01060	SD-01 Preconstruction Submittals															
			Qualifications		G DO													
			Accident Prevention Plan		G DO													
			SD-07 Certificates															
			Activity Phase Hazard Analysis		G DO													
			Plan															
			Safety Meeting Reports		FIO													
			Accident Reports		FIO													
			OSHA 300 Log		FIO													
			Floating Plant Inspection		G DO													
		01320	SD-07 Certificates															

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
Beach Nourishment, Cape May Inlet to Lower Township, Cape May, NJ

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH #	CLASSIFICATION GOVT OR A/E REVWR	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION			APPROVING AUTHORITY					REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION	MAILED TO CONTR/ DATE RCD FRM APPR AUTH	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		01320	Photography Plan		G DO												
			Pre-Construction Photographs		G COR												
			Construction Photographs		G COR												
			Post-Construction Photographs		G COR												
		01325	SD-07 Certificates														
			Preliminary Project Schedule		G DO												
			Final Project Schedule		G DO												
		01330	SD-07 Certificates														
			Review and Complete Submittal		G COR												
			Register (ENG Form 4288)														
			Update Submittal Register (ENG		G COR												
			Form 4288)														
		01350	SD-07 Certificates														
			Diving Plan		*												
			Diving Operations Manual		*												
			Air Quality Certifications		*												
			Daily Logs		*												
		01355	SD-04 Samples														
			Hopper Dredge Basket or		G COR												
			Screens														
			Environmental Protection Plan		G DO												
			Government Observer		G DO												
			Accommodations Plan														
		01450	SD-07 Certificates														
			Interim Quality Control Plan		G DO												
			Final Quality Control Plan		G DO												

* To be submitted for Government acceptance, subject to resubmittal if deemed necessary by the C.O.

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
Beach Nourishment, Cape May Inlet to Lower Township, Cape May, NJ

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH #	CLASSIFICATION	GOVT OR A/E REVWR	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION			APPROVING AUTHORITY					
							SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION	MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
(a)	(b)	(c)	(d)	(e)	(f)		(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		01450	Qualifications		G COR													
			Changes to Quality Control Plan		G DO													
			Daily CQC Report		G COR													
			Preparatory, Initial, and Final		G COR													
			Phase Meeting Minutes															
		01500	SD-07 Certificates															
			Temporary Facilities Layout		G COR													
		01720	SD-07 Certificates															
			Qualifications		G DO													
			Preliminary Pre-Placement		G COR													
			Condition Surveys															
			Final Pre-Placement Condition		G DO													
			Surveys															
			Before- and After-Dredging		G DO													
			Surveys of Borrow Area															
			Before- and After-Beachfill		G DO													
			Surveys															
			Metadata		G DO													
			Surveying Procedures and		G DO													
			Equipment															
		01780	SD-07 Certificates															
			Progress Prints		G COR													
			SD-11 Closeout Submittals															
			As-Built Drawings		G COR													
		02373	SD-03 Product Data															

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
Beach Nourishment, Cape May Inlet to Lower Township, Cape May, NJ

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH #	CLASSIFICATION	GOVT OR A/E REVWR	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION			APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
							SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)		(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		02373	Thread	2.2	G DO													
			SD-04 Samples															
			Quality Assurance Samples and		G DO													
			Tests															
			SD-07 Certificates															
			Geotextile	2.1	G DO													
		02390	SD-07 Certificates															
			Work Plan		G DO													
			Debris Prevention Plan		G COR													
			Qualifications		G COR													
			Pumpout Plan		G COR													
			Grade Stake Recovery Plan		G COR													
			SD-02 Shop Drawings															
			Borrow Areas		G DO													
			SD-06 Test Reports															
			DGPS Positioning		FIO													
			Test Reports		G COR													
		02400	SD-02 Shop Drawings															
			Outfall Extensions		G DO													
			SD-03 Product Data															
			Flexible Coupling		G COR													
			Ductile Iron Pipe		G COR													
			SD-07 Certificates															
			Detailed Work Plan		G DO													
			Flexible Coupling and Clamps		G COR													

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
Beach Nourishment, Cape May Inlet to Lower Township, Cape May, NJ

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH #	CLASSIFICATION	GOVT OR A/E REVWR	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION			APPROVING AUTHORITY					REMARKS
							SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION	MAILED TO CONTR/ DATE RCD FRM APPR AUTH	
(a)	(b)	(c)	(d)	(e)	(f)		(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		02400	Ductile Iron Pipe, and Fittings		G COR													
			Rubber Gaskets		G COR													
			Outfall Extension		FIO													
		02446	SD-07 Certificates															
			Sand Fence		FIO													
			Dune Grass Plants and Seed		FIO													
		02500	SD-02 Shop Drawings															
			Handicap, Vehicle, and		G DO													
			Pedestrian Crossovers, and															
			Access Road															
			SD-03 Product Data															
			Materials for Handicap, Vehicle,		G DO													
			and Pedestrian Crossovers															
			SD-06 Test Reports															
			Grain Size Distribution Curves		G DO													
			SD-07 Certificates															
			Work Plans for Handicap, Vehicle,		G DO													
			and Pedestrian Crossovers															
		06140	SD-07 Certificates															
			Equipment Description		G DO													
			Detailed Work Plan		G DO													
			Timber Piles		FIO													
			Timber Cribbing		FIO													
			Thru Bolts, Nuts, and Washers		G DO													
			Preservative Treatment Certificate		G DO													
			Pile Driving Records		G DO													

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SECTION 01350

DIVING SERVICES

PART 1 GENERAL

1.1 SCOPE OF SECTION

The work specified in this section includes the development and enforcement of a diving services plan.

NOTE: Though diving services are not required as part of the general scope of work for this project, it is Philadelphia District policy to include a section covering commercial diving operations for all construction projects that are conducted on, or near, the water. The reasoning for this is the fact that unforeseen circumstances (such as lost equipment recovery, unknown sunken object investigation/removal, etc.) may require the need for commercial diving services. In the event the need for this type of operation occurs, including a commercial diving section in the contract specifications helps to ensure that the Contractor is aware of the requirements for conducting commercial diving operations on USACE Philadelphia District projects.

1.2 GENERAL REQUIREMENTS

All diving performed under this contract shall be in strict accordance with the rules and regulations prescribed by the U.S. Navy Diving Manual: 0910-LP-708-8000; 29 CFR Part 1910, Subpart T; 29 CFR Part 1915; the EM 385-1-1, Section 30; and ER 385-1-86, except as modified below. A Contracting Officer's Representative, will be designated by the Contracting Officer at the Post Award Conference, to act for the Contracting Officer for all submissions, directions and/or acceptance(s) required under the specifications. There will also be an individual designated as the District Dive Coordinator.

1.3 REFERENCES

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

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(Latest Rev.) Safety and Health Requirements Manual
ER 385-1-86	(July 1994) Engineer Regulation, Government Personnel Diving Operations

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR Part 1910	(Latest Rev) Occupational Safety and Health Standards
29 CFR Part 1915	(Latest Rev) Safety and Health Standards Applicable to Shipyard Employment

NAVAL SEA SYSTEMS COMMAND (NSSC)

0910-LP-708-8000	(March 2001) U.S. Navy Diving Manual, Revision 4, Change A

1.4 SUBMITTALS

NOTE: The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES. These submittals are for Government acceptance. The COR may require resubmittal of these submittals if deemed necessary.

SD-07 Certificates

Diving Plan; G,DO.

Submit, for review, at least 10 days prior to operations, a Project/Task Specific Dive Plan prior to performing any actual dive task or assignment. Each separate Dive Plan will require review and acceptance by the Contracting Officer's Representative prior to commencing any diving required under this contract. A typical Dive Plan (the Contractor may prepare a form with the appropriate subject/item already listed with blank spaces to be filled in as required for each Dive Plan submitted) shall include the following information as a minimum:

a. Dive Plan for: (project and specific tasks).

b. Name of Contractor (and at least 2 diving subcontractor if required).

c. Contract Number.

d. Date of Dive Plan submission.

e. Name of diving supervisor preparing the Dive Plan.

f. Description of proposed work and diving mission.

g. Approximate time and date dive mission will start.

h. Listing of diving equipment to be used.

i. Name or type of diving platform to be used.

j. Planned depth of dive and maximum depth to bottom.

k. Maximum single dive bottom time for the planned depth of dive for each diver.

l. Surface and underwater conditions , to include visibility, temperature, thermal protection, and currents.

m. Lockout/Tagout procedures, including procedures for dealing with differential pressures.

n. Listing of special tools or equipment to be used.

o. Materials to be handled or installed.

p. Listing by name each member of the diving team. The first time each diver is employed on the job, the Contractor shall attach to the dive plan a qualification statement and copy of the diver's current medical record, giving the physician's written report and opinion of the diver's fitness for exposure to hyperbaric conditions, including any limitations to such exposure. The required qualifications statement and current medical report shall be in accordance with EM 385-1-1. Diver's qualification statement and medical record need not be attached to subsequent Dive Plans unless a diver's medical report has expired and a new medical report has been submitted.

q. Listing by name each person directly involved in topside assistance/support to the dive team.

r. Listing of information and equipment required at the dive site. The following information and work materials shall be available at the dive site, either referenced in the Diving Operations Manual or work materials furnished by the Contractor: U. S. Navy Standard Air Decompression Table; Diving Log Sheets; Repetitive Dive Worksheets; Table of No-Decompression Air Dives; means of direct emergency communications between the dive site and the Contractor's project office, the Dive Coordinator/Dive Inspector; stop watch or equivalent, as required to monitor times for each diver; standard first aid supplies; litter or tilt board and a manual resuscitator capable of administering oxygen; portable VHF marine band radio as required to communicate with vessel traffic.

s. Listing of information required at the dive site and the project office; local emergency medical assistance names, locations, and telephone numbers for ambulance service, hospital, and doctor, emergency medical evacuation assistance for ground and/or air transportation facilities with point of contact names, locations and telephone numbers; nearest emergency medical facility with hyperbaric chamber capable of recompression equivalent to 165 feet of water, with point of contact names, location and telephone numbers.

t. The Diving Plan shall contain the following statement: "If for any reason the diving plan, as accepted, is altered in scope of mission, depth, personnel, or equipment, the Philadelphia District Diving Coordinator shall be contacted in order to review the proposed diving plan revision prior to the actual diving operation." (24 Hrs).

Diving Operations Manual.

Submit, for review, at least 15 days prior to operations, a Diving Operations Manual, which shall depict the Contractor's general plan for accomplishing the diving operations required under this contract. The Diving Operations Manual will be reviewed by the Contracting Officer's Representative prior to commencing of any diving operations under this contract. The Diving Operations Manual shall include the following information as a minimum:

a. A complete copy of 29 CFR Part 1910, Subpart T, and the Contractor's proposed method of complying with each of its pertinent parts.

b. U. S. Navy Standard Air Decompression Table.

c. A sample of the Diving Log sheets to be used under this contract.

d. A sample of the Repetitive Dive Worksheets or equivalent (dive profile method) to be used under this contract.

e. U. S. Navy Table of No-Decompression Limits and Repetitive Group Designation for No-Decompression Air Dives.

f. U. S. Navy Residual Nitrogen Timetable for Repetitive Air Dives.

g. An outline of emergency communications between the dive site and the Contractor's project office (located at the job site); Contractor-furnished portable radios, hardware, telephone hookup, etc.

h. Emergency assistance information, including location, telephone numbers, and names of nearest doctor, hospital, emergency ground and air transportation, recompression facilities, and other appropriate medical assistance.

i. An Activity Hazard Analysis Plan, setting forth potential hazards, means of prevention, and actions to be taken should an accident involving the potential hazard occur. Minimum coverage in the Activity Hazard Analysis Plan shall include; means of prevention and procedures for dealing with fire, equipment failure, and adverse environmental conditions, drowning, air embolism, decompression sickness, traumatic injury, hypoxia, carbon dioxide excess, carbon monoxide excess, strangulation, various type of squeezing, fouling or entanglement, mechanical injury, overexertion/exhaustion, hypothermia, hyperthermia, currents caused by hydraulic differential through the structure, and electrocution and blowup if dry suits are used.

j. An outline of pre-dive briefings and equipment checkout procedures for daily diving activities under this contract.

k. An outline of qualifications and experience requirements for the dive team members, required under this contract. As a minimum, each team member shall have at least one (1) year of commercial experience in the applicable position; divers shall have completed at least four (4) working dives to the depths required by this contract, using the particular diving techniques and equipment to be used under this

contract. Divers shall demonstrate that at least one (1) of the four (4) qualification dives was performed in the last six (6) months prior to the contract award date.

l. An outline of the medical qualifications required for divers to be employed under this contract. As a minimum, each diver shall meet the certification requirements specified in 29 CFR Part 1910, Subpart T, and EM 385-1-1, Section 30.

m. An outline of diving equipment, maintenance procedures and certification of analysis of air output for diving air supply compressors to be used under this contract. As a minimum, the equipment maintenance procedures shall indicate method of testing, frequency, and repair methods used. Diving air supply compressors' output air shall be in conformance with the following limits: oxygen - 20 to 22 percent by volume, carbon dioxide - 1,000 ppm maximum, carbon monoxide - 20 ppm maximum, total hydrocarbons - 25 ppm maximum, particulates - 5 mg/cubic meter maximum, and have no objectionable odor.

n. An outline of administrative and record-keeping procedures. As a minimum, the outline shall contain (by title of position) job responsibilities, the chain of command, daily briefing and diving safety orientation procedures, log and diving-related record-keeping responsibilities, equipment maintenance and pre-dive equipment checklist, etc.

Air Quality Certifications.

Submit, for review, at least 10 days prior to any diving operations, Air Quality Certifications for accomplishing the diving operations required under this contract, in conformance with the limits stated in the above paragraph n, of the Diving Operations Manual. The Air Quality Certifications will be reviewed by the Contracting Officer's Representative prior to commencing of any diving operations under this contract.

Daily Logs.

Submit each day, to the Contracting Officer/District Dive Coordinator fully completed copies of the previous day's Diving Log Sheets and any other work sheets prepared in conjunction with the Diving Log Sheets.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 RESTRICTIONS

Only surface air-supplied diving within the No-Decompression Limits, using the previously cited U. S. Navy Diving Tables, will be permitted under this contract, unless otherwise accepted by the Contracting Officer. Any deviation from or modification to the U. S. Navy Diving Tables, proposed by

the Contractor, shall be submitted at the time the Diving Operations Manual is submitted, with any such deviation or modification clearly identified for review purposes.

3.2 DOCUMENTS AVAILABILITY

One (1) copy of the accepted Diving Operations Manual (to be kept in D.O.) and one (1) copy of the appropriate accepted Diving Plan shall be available at the dive site while diving operations are underway.

3.3 COORDINATION

All diving activities shall be conducted with full knowledge and close coordination with the Contracting Officer and Dive Coordinator. Divers shall not enter the water or move from prescribed location without the acceptance of the Dive Inspector or Dive Coordinator.

3.4 PRE-DIVE CHECK

Prior to the dive and at the scene of the dive, the Contractor will meet with the USACE diving inspector and shall insure, as a minimum, the following pre-dive checks are performed:

a. Breathing air tanks contain sufficient air supply to perform the required work, i.e., standby air tanks are on site and full to the capacity (3,000 psi). A pressure reading shall be taken to insure that approximately 3,000 psi of breathing air is contained.

b. All diving equipment shall be checked for proper function prior to diver entry.

c. All necessary safety equipment specified hereinbefore are on site and functioning properly.

d. Lockout/tagout procedures are followed and the diving supervisor is in possession of the key or keys.

e. Crane signals are reviewed and radio communications with the crane operator is functioning properly, when applicable.

f. Welding or cutting procedures are clearly reviewed, the proper welder polarity is set and precautions have been taken to insure that electrocution will not occur.

g. A pre-dive briefing shall be given which includes but is not limited to, the accident management plan, activity hazards analysis, equipment check list, diving logs, diving conditions, and diving procedures.

3.5 DIVE TEAM CREW REQUIREMENTS

The following dive team members are required as the minimum crew manning levels:

Comply with EM 385-1-1, Appendix N, Table III.

3.5.1 Surface-Supplied Air Mode

All working dives requiring communications between the Divers and topside to direct crane load movements, etc., shall be performed in surface-supplied air mode. The minimum crew manning level consists of the In-water Diver, Stand-by Diver, Diver Tender, and Dive Supervisor. A member of the crew shall be responsible for radio communications and timekeeping. Surface-supplied air gear shall include hardwire communications and a diver carried air reserve.

3.6 MEASUREMENT AND PAYMENT

The work specified in this section will not be measured for payment and all costs in connection therewith shall be included in the costs of all the bid items.

-- End of Section --

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SECTION 01355

ENVIRONMENTAL PROTECTION

PART 1 GENERAL

1.1 SCOPE OF SECTION

This section covers the furnishing of all labor, material and equipment and performing all work required for the protection of the environment during construction operations except for those measures set forth in other sections of these specifications.

1.2 REFERENCES (Not Applicable)

1.3 GENERAL

For the purpose of this specification, environmental protection is defined as the retention of the environment in its natural state to the greatest extent possible during project construction and to enhance the natural appearance in its final condition. Environmental protection requires consideration of air, water, and land resources and involves noise, solid waste-management and management of other pollutants. In order to prevent, and to provide for abatement and control of any environmental pollution arising from the construction activities in performance of this contract, the Contractor and his subcontractors shall comply with all applicable Federal, state, and local laws and regulations and shall obtain all necessary permits required by same.

1.4 NOTIFICATION

The Contracting Officer will notify the Contractor in writing of any non-compliance with the aforementioned Federal, state, or local laws or regulations. Such notice, when delivered to the Contractor or his authorized representative at the site of the work, shall be deemed sufficient for the purpose. The Contractor shall, after receipt of such notice, immediately inform the Contracting Officer of proposed corrective action and take such action as may be approved. 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 any such stop orders shall be made subject of a claim for extension of time or for excess costs or damages by the Contractor.

1.5 SUBCONTRACTORS

Compliance with the provisions of this section by subcontractors will be the responsibility of the Contractor.

1.6 SUBMITTALS

Government approval is required for submittals with a "G" designation;

submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-04 Drawings

Hopper Dredge Basket or Screens; G,COR.

Drawings showing the design and method of fabrication of the basket or screen used for hopper dredging as specified shall be submitted for approval prior to the commencement of dredging activities.

SD-18 Records

Environmental Protection Plan; G,DO.

Prior to commencement of the work, the Contractor shall submit to the Contracting Officer for approval his proposed environmental protection plan. This shall be followed by a meeting with representatives of the Contracting Officer to develop mutual understandings relative to compliance with this provision and administration of the environmental protection program. Approval of the Contractor's plan for environmental protection will not relieve the Contractor of his responsibility for adequate and continuing control of pollutants.

Government Observer Accommodations Plan; G,DO.

Prior to commencement of hopper dredging work, the Contractor shall submit to the Contracting Officer for approval his proposed Government observer accommodations plan as specified in this section.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 PROTECTION OF LAND RESOURCES

3.1.1 General

The land resources within the project boundaries and outside the limits of permanent work performed under this contract shall be preserved in their present condition or be restored to a condition after completion of construction that will appear to be natural and not detract from the appearance of the project. The Contractor shall confine his construction activities to areas defined by the plans and specifications. The following additional requirements are intended to supplement the requirements of the Contract Clauses.

3.1.2 No Disturbance Zone

The areas indicated on the drawings as a no disturbance zone represents an existing habitat area that is well vegetated. The Contractor will not be permitted any access to this area. The Contractor shall take extra

precautions to protect existing vegetation in this area from damage.

3.1.3 Prevention of Landscape Defacement

The Contractor shall not deface, injure, or destroy trees or shrubs, nor remove or cut them without the authority of the Contracting Officer. Ropes, cables, or guys shall not be fastened to or attached to any existing nearby trees for anchorages unless specifically authorized. Where such special emergency use is permitted, it shall be performed in such a manner as to avoid damage to the trees. The Contractor shall in any event be responsible for any damage resulting from such use. Where the possibility exists that trees may be defaced, bruised, injured, or otherwise damaged by the Contractor's equipment or operations, the Contractor shall adequately protect such trees. Stone, earth or other material that is displaced into uncleared areas shall be removed. Monuments and markers shall be protected before construction operations commence.

3.1.4 Vegetation on Dunes

The Contractor shall take extra precautions to protect any existing vegetation on existing dunes from damage.

3.1.5 Seabeach Amaranth

The Contractor shall take all necessary actions to ensure protection of the seabeach amaranth plant, which is a Federally threatened species. The seabeach amaranth growing season runs from May through November. The Contractor shall ensure that all employees are aware of the potential presence of a threatened species and provide sufficient information describing the seabeach amaranth. The COR shall be immediately notified if any seabeach amaranth plants are located within the project area. State personnel will conduct amaranth surveys and delineate any plant locations within the project area prior to construction activities. If any plants are found, the Contractor shall be responsible for establishing a 3 meter buffer zone around any plant. Construction activities will avoid any delineated locations of seabeach amaranth to the greatest extent possible until the plant dies back or can be relocated by the appropriate agency. Construction activities are defined as, but not limited to, surveys, the movement of equipment and vehicles and the placement/storage of materials or piping. There is currently one known population of seabeach amaranth within the project area. The last known location of the plant is identified on the drawings. The Contractor shall be responsible for taking any additional action, as directed by the COR, to insure adequate protection of the seabeach amaranth

3.1.6 Restoration of Landscape Damage

Any dune grassed areas or other landscape features, including parking lots scarred or damaged by the Contractor's equipment or operations shall be restored to a condition satisfactory to the Contracting Officer. Any disturbed dune grassed areas shall be replanted as directed by the Contracting Officer.

3.1.7 Construction of Temporary Facilities

The Contractor's temporary facilities shall be constructed in the areas indicated on the contract drawings. The preservation of the landscape shall be an imperative consideration in the use of all sites.

3.1.8 Post Construction Cleanup or Obliteration

The Contractor shall obliterate all signs of temporary construction facilities, excess materials, or any other vestiges of construction as directed by the Contracting Officer. The area will be restored to near natural conditions which will permit the growth of vegetation thereon.

3.2 RECORDING AND PRESERVING HISTORICAL AND ARCHAEOLOGICAL FINDS

All items having any apparent historical or archaeological interest which are discovered in the course of any construction activities shall be carefully preserved. The Contractor shall leave the archaeological find undisturbed and shall immediately report the find to the Contracting Officer so that proper authorities may be notified.

3.3 PROTECTION OF WATER RESOURCES

3.3.1 General

The Contractor shall not pollute any river, inlet, or ocean with fuels, oils, bitumens, calcium chloride, acids, insecticides, herbicides or other harmful materials. The Contractor shall investigate and comply with all applicable Federal, state, county, and municipal laws concerning pollution of rivers, inlets, and oceans.

3.3.2 Disposal

Disposal of any debris resulting from the contract work and any wastes, effluents, trash, garbage, oil, grease, chemicals, etc., in or adjacent to the work area will not be permitted. If any waste material is dumped in unauthorized areas, the Contractor shall remove the material and restore the area to its original condition. If necessary, contaminated ground shall be excavated, disposed of as directed by the Contracting Officer, replaced with suitable fill material, compacted, finished, and planted as required to reestablish vegetation.

3.4 PROTECTION OF FISH AND WILDLIFE

3.4.1 General

The Contractor shall at all times perform all work and take such steps required to minimize interference with or disturbance to fish and wildlife. The Contractor will not be permitted to alter water flows or otherwise disturb native habitat adjacent to the work area which, in the opinion of the Contracting Officer, are critical to fish and wildlife. The Contractor shall anticipate orders to stop work at the discretion of the Contracting Officer if any fish or wildlife are endangered by construction activities.

3.4.2 Piping Plover

The Contractor shall take all necessary actions to ensure protection of the piping plover bird, which is a Federally threatened species. The piping plover nesting season begins on 15 March (approximately) and ends on 15 August (approximately). The Contractor shall ensure that all employees are aware of the potential presence of a threatened species and provide sufficient information describing the piping plover. The COR shall be immediately notified if any piping plovers are sighted in the vicinity of the project area. During the piping plover nesting season, the Contractor shall be responsible for establishing a 300 meter buffer zone between all construction activities and piping plover nests. Construction activities are defined as, but not limited to, the movement of equipment and vehicles and the placement/storage of materials or piping. Once a piping plover chick hatches on one nest, or earlier if deemed necessary the Contractor shall be responsible for establishing a 1000 meter buffer zone between all construction activities and all piping plover nests. The Contractor shall delineate the buffer zones by erecting orange plastic fencing. All Contractor personnel, vehicles and equipment must remain outside the buffer zones unless given approval by the COR. Plover monitors will be on-site to monitor and delineate each piping plover nesting site within the buffer zones. Absolutely no access is permitted within the State-delineated nesting zones. The Contractor shall be responsible for taking any additional action, as directed by the COR, to insure adequate protection of the piping plover nests and chicks.

Historically, piping plover chicks hatch about mid-May.

Historically, piping plovers have nested within the project area, and are expected to be present during the nesting season. Piping plovers have the potential to nest anywhere within the contract limits. The Contractor shall be prepared to take all necessary actions to ensure protection of the piping plover, regardless of the nesting location within the contract limits, in accordance with the specifications above.

3.4.2.1 Surveying Operations

Piping plover nesting areas will be identified and roped off by the New Jersey Department of Environmental Protection in March each year and the rope will remain in place until approximately the middle of August. When conducting beach profile surveys, the Contractor shall be cognizant of piping plover nesting areas and may not enter any roped-off areas for any reason without approval of the Contracting Officer. In addition, vehicles will not be permitted within 300 meters of these nesting areas until after 15 August. If a sled is being used during the survey efforts, it shall remain below the water line at all times. The Contractor shall notify the Contracting Officer if a sled will be used during surveying operations, prior to the start of survey operations.

3.4.3 Horseshoe Crabs

To avoid impacts to horseshoe crab spawning, the Contractor is prohibited from completing any contract work on the Cape May Point beach (Station 79+50 to 118+61 of Baseline No. 2) between April 1 and August 15.

3.4.4 Whale and Turtle Monitoring (Hopper Dredging Only)

The Contractor shall have a National Marine Fisheries Service (NMFS) and Corps of Engineers approved turtle/whale monitor on board to observe for the presence of whales and turtles during all dredging activities in this contract conducted between 1 June and 30 November. The presence of any whales or turtles will be recorded on the Daily Report of Operations form, as well as the monitoring forms that will be supplied.

3.4.5 HOPPER DREDGING REQUIREMENTS

If a hopper dredge is used for dredging, the Contractor shall comply with the following requirements from 1 June to 30 November. The intent of the following requirements are to monitor and document the presence of and document the effect of dredging on sea turtles. The intent of the following requirements is not to stop the dredging operations upon the encounter with sea turtles.

3.4.5.1 General

The Government will also place aboard the Contractor's dredge, a Government observer to monitor for the presence of sea turtles and/or sea turtle parts being pulled into the hopper during all dredging operations. The Contractor shall notify the Contracting Officer of the dredging starting date, a minimum of seven calendar days prior to the commencement of dredging operations. The Contractor shall not perform dredging operations unless the Government observer is aboard the Contractor's dredge and baskets or screening have been approved and installed. The Contractor shall provide a private sleeping quarter and a private bathroom and private shower facility, for the exclusive use by the Government observer. The Contractor shall also provide accommodations and meals for the observer in accordance with SPECIAL CLAUSE: ACCOMMODATIONS AND MEALS FOR GOVERNMENT INSPECTORS; and transportation for the observers in accordance with SPECIAL CLAUSE: INSPECTION. These requirements shall be in addition to those for the government inspectors.

3.4.5.2 Hopper Dredge Modifications

a. Baskets or Screens: The Contractor shall install baskets or screening over the hopper inflow and overflows. The baskets or screening shall have openings of approximately 4 inches by 4 inches. Dredges not capable of screening both hopper inflow and overflow will not be acceptable under this contract. The design and method of fabrication will depend on the construction of the dredge used and shall be subject to the approval of the Contracting Officer. The screening or baskets shall provide 100 percent coverage of all dredged material for hopper inflow or overflow. The baskets or screening shall remain in place during all dredging operations.

b. Floodlights: The Contractor shall install and maintain floodlights to allow the Government observers to safely monitor the baskets or screening.

c. Dragheads: Bars, screening or grates placed over the draghead shall have an opening of not less than 18 inches by 24 inches. The Contractor shall

make any adjustments or modifications to the dredge to accommodate the above requirement.

d. Freezer: The Contractor shall provide sufficient space in a freezer aboard the dredge for storing dead sea turtles or any turtle parts collected during the dredging operations.

3.4.5.3 Special Dredging Operating Requirements

The Contractor shall allow sufficient time between each dredging cycle for the Government observers for: inspection of the baskets or screens for turtles and/or turtle parts; documentation; and collection and labeling of any dead turtle or turtle parts for freezing. The dragarm will not be operated while in the water column to minimize potential impacts to sea turtles. Operation should begin when the dragarm reaches the sediment and end before the dragarm is removed from the sediment.

3.5 DISPOSAL OF DEBRIS

All debris resulting from construction operations on this contract shall be removed from the work site and disposed of at the Contractor's expense. Such disposal shall comply with all applicable Federal, state, and local laws. Such materials shall be removed from the site of the work before the date of completion of the work under these specifications.

3.6 MAINTENANCE OF POLLUTION, EROSION AND SEDIMENTATION CONTROL FACILITIES DURING CONSTRUCTION

During the life of this contract, the Contractor shall maintain all facilities constructed for pollution, erosion and sedimentation control under this contract as long as the operations creating the particular pollutant are being carried out or until the material concerned has become stabilized to the extent that pollution is no longer being created. During the construction period, the Contractor shall conduct frequent training sessions on environmental protection. The curricula should include methods of detecting and avoiding pollution; familiarity with pollution standards, both statutory and contractual; and installation and care of vegetative covers, plants and other facilities to prevent and correct environmental pollution.

3.7 MEASUREMENT AND PAYMENT

3.7.1 Sea Turtle Modifications and Whale Monitoring

The work specified in this section for the sea turtle modifications and whale monitoring will not be measured for payment and all costs in connection therewith shall be included in the contract lump sum price for Base Bid Item No. 1c., Option No. 1 Item No. 2b (if Option 1 is awarded), "Sea Turtle Modifications and Whale Monitoring". The unit prices for Option Nos. 2, 3, 4 and 5 "Beachfill" shall also include all costs in connection therewith for the sea turtle modifications and whale monitoring required under the dredging operations of these options if awarded.

3.7.2 Environmental Protection

No separate measurement or payment will be made for all other work specified in this section and all costs in connection therewith shall be included in the costs of all the bid items.

-- End of Section --

SECTION 01420

SOURCES FOR REFERENCE PUBLICATIONS

PART 1 GENERAL

1.1 REFERENCES

Various publications are referenced in other sections of the specifications to establish requirements for the work. These references are identified in each section by document number, date and title. The document number used in the citation is the number assigned by the standards producing organization, (e.g. ASTM B 564 Nickel Alloy Forgings). However, when the standards producing organization has not assigned a number to a document, an identifying number has been assigned for reference purposes.

1.2 ORDERING INFORMATION

The addresses of the standards publishing organizations whose documents are referenced in other sections of these specifications are listed below, and if the source of the publications is different from the address of the sponsoring organization, that information is also provided. Documents listed in the specifications with numbers which were not assigned by the standards producing organization should be ordered from the source by title rather than by number.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
11 West 42nd St
New York, NY 10036
Ph: 212-642-4900
Fax: 212-398-0023
Internet: www.ansi.org/
Note: Documents beginning with the letter "S" can be ordered from:
Acoustical Society of America
P. O. Box 1020
Sweickley, PA 15143-9998
Ph: 412-741-1979
Fax: 412-741-0609
Internet: asa.aip.org
AOK 6/00
LOK 6/00

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
100 Barr Harbor Drive
West Conshohocken, PA 19428-2959
Ph: 610-832-9585
Fax: 610-832-9555
Internet: www.astm.org
AOK 6/00

LOK 6/00

NOTE: The annual ASTM Book of Standards (66 Vol) is available for $3500.00. Prices of individual standards vary.

AMERICAN WOOD-PRESERVERS' ASSOCIATION (AWPA)
P.O. Box 5690
Grandbury, TX 76049-0690
Ph: 817-326-6300
Fax: 817-326-6306
Internet: http://www.awpa.com
AOK 8/00
LOK 6/00

NOTE: AWPA Book of Standards is published yearly @$75.00; individual standards may be ordered separately for $12.00 to $28.00 each.

CODE OF FEDERAL REGULATIONS (CFR)
Order from:
Government Printing Office
Washington, DC 20402
Ph: 202-512-1800
Fax: 202-275-7703
Internet: http://www.gpo.gov
AOK 8/00
LOK 6/00

NEW JERSEY DEPARTMENT OF TRANSPORTATION (NJDOT)
Configuration Management
E&O Building, 1st Floor
1035 Parkway Avenue
CN 600
Trenton, NJ 08625-0600
Ph: 609-530-5587
Internet:
http://www.state.nj.us/transportation/cpm/NJDOT%20Standard%20Specifications/standard_specs.htm

SOUTHERN PINE INSPECTION BUREAU (SPIB)
4709 Scenic Highway
Pensacola, FL 32504-9094
Ph: 850-434-2611
Fax: 850-433-5594
E-mail: spib@spib.org
Internet: www.spib.org
AOK 8/00
LOK 6/00

U.S. ARMY CORPS OF ENGINEERS (PHILADELPHIA DISTRICT)
100 Penn Square East
Wanamaker Building
Philadelphia, PA 19107
Ph: 215-656-6519/6520

U.S. ARMY CORPS OF ENGINEERS (COE-SOH)
Internet: http://www.hq.usace.army.mil/soh/hqusace_soh.htm
AOK6/99

U. S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)
National Archives and Records Administration
700 Pennsylvania Avenue, N.W.
Washington, D.C. 20408
Ph: 866-325-7208
Internet: www.nara.gov
AOK 8/00
LOK 6/00

PART 2 PRODUCTS

PART 3 EXECUTION

-- End of Section --

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SECTION 01450

CONTRACTOR QUALITY CONTROL

PART 1 GENERAL

1.1 SCOPE OF SECTION

The work specified in this section includes the development and implementation of a quality control program that consists of plans, procedures, and an organization necessary to produce an end product which complies with the contract requirements.

1.2 REFERENCES

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

AMERICAN SOCIETY FOR TESTING AND MATERIALS (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	(2000b) Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-07 Certificates

Interim Quality Control Plan; G,DO.

Interim quality control plan shall be submitted not later than 10 days after receipt of notice to proceed, and prior to the start of work, to cover the first 30 days of operation.

Final Quality Control Plan; G,DO.

Final quality control plan shall be submitted within first 30 days of operation.

Qualifications; G,COR.

Qualifications of CQC System Manager, Alternate CQC System Manager, and other CQC Personnel indicated in "Experience Matrix."

Changes to Quality Control Plan; G,DO.

Contractor shall notify Contracting Officer, in writing, of any proposed change to the CQC Plan or personnel.

Daily CQC Report; G,COR.

Submitted within 24 hours after the date covered by the report.

Preparatory, Initial, and Final Phase Meeting Minutes; G,COR.

Minutes to be attached to the Daily Quality Control Report for the day of the meeting.

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 construction operations, both onsite and offsite, and shall be keyed to the proposed construction sequence. The site project superintendent will be held responsible for the quality of work on the job 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 days after receipt of notice to proceed, the Contractor Quality Control (CQC) Plan proposed to implement the requirements of the Contract Clause titled "Inspection of Construction." The plan shall identify personnel, procedures, control, instructions, tests, records, and forms to be used. The Government will consider an interim plan for the first 30 days of operation. Construction will be permitted to begin only after acceptance

of the CQC Plan or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the features of work included in an accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional features of work to be started.

3.2.1 Content of the CQC Plan

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

a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff shall implement the three phase control system for all aspects of the work specified. The staff shall include a CQC System Manager who shall report to the project 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 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 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 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 14 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, show 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, graduate architect, or a graduate of construction management, with a minimum of 10 years of current 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 no other duties. 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 Additional Requirement

In addition to the above experience the CQC System Manager shall have completed the course entitled "Construction Quality Management For Contractors". This course is periodically offered by the Philadephia District U.S. Army Corps of Engineers.

3.4.4 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 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 72 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 72 hours in advance of beginning the initial phase. Separate minutes of this phase shall be prepared by the CQC System Manager and attached to the daily CQC report. Exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.

g. The initial phase should be repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

3.6.3 Follow-up Phase

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

3.6.4 Additional Preparatory and Initial Phases

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

3.7 TESTS

3.7.1 Testing Procedure

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

a. Verify that testing procedures comply with contract requirements.

b. Verify that facilities and testing equipment are available and comply with testing standards.

c. Check test instrument calibration data against certified standards.

d. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.

e. Results of all tests taken, both passing and failing tests, shall be recorded on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test shall be given. If approved by the Contracting Officer, actual test reports may be submitted later with a reference to the test number and date taken. An information copy of tests performed by an offsite or commercial test facility shall be provided directly to the Contracting Officer. Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this contract.

3.7.2 Testing Laboratories

3.7.2.1 Capability Check

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

3.7.2.2 Capability Recheck

If the selected laboratory fails the capability check, the Contractor will be assessed a charge of $1500 to reimburse the Government for each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory. Such costs will be deducted from the contract amount

due the Contractor.

3.7.3 Onsite Laboratory

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

3.7.4 Furnishing or Transportation of Samples for Testing

Costs incidental to the transportation of samples or materials shall be borne by the Contractor. Samples of materials for test verification and acceptance testing by the Government shall be delivered to the Corps of Engineers Division Laboratory.

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

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 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. 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. 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.

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 24 hours after the date covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, one report shall be prepared and submitted for every 7 days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the CQC System Manager. The report from the CQC System Manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

3.10 SAMPLE FORMS

Sample forms enclosed at the end of this section.

3.11 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

3.12 MEASUREMENT AND PAYMENT

The work specified in this section will not be measured separately for payment and all costs in connection therewith will be included in the cost of all the bid items.

-- End of Section --

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(Sample of typical Contractor Quality Control Report)

CONTRACTOR"S NAME
(address)

DAILY CONSTRUCTION QUALITY CONTROL REPORT

Contract No. _____ Date _____

Project Name _____ Report No. _____

Weather _____

Phases of Construction in Progress (Give briefly only phase or phases of work in progress)

Material and/or Equipment Delivered to Site (Including equipment demob)

Inspection Made (Include negative inspections, phase of in-progress construction work inspected and all deficiencies noted during inspections)

Preparatory

Initial

Follow-up

Tests Performed and Results or Tests (including results of tests taken on previous dates)

Verbal Instructions Received (List any instructions given by Contracting Officer personnel on construction deficiencies, retesting required etc., with action to be taken)

Changed Conditions/Delays/Conflicts Encountered

Remarks

SIGNATURE _____
Quality Control Inspector

Contractor's Verification: The above report is complete and correct and all material and equipment used and work performed during this reporting period are in compliance with the contract and specifications except as noted above, and job safety and health requirements are in accordance with the USACE Safety and Health Requirements Manual EM 385-1-1.

_____
Contractor's Approved Authorized Representative

SECTION 01500

TEMPORARY CONSTRUCTION

PART 1 GENERAL

1.1 SCOPE OF SECTION

The work covered by this section consists of furnishing all labor, materials, plant and equipment, and performing all operations required for the construction of storage areas and service facilities needed for execution and completion of the work. Also included is the establishment of local contacts. Other work included in this section consists of providing Contractor and Government field offices, safety fence, security fence, and project and safety signs.

1.2 REFERENCES

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

NEW JERSEY DEPARTMENT OF TRANSPORTATION (NJDOT)

NJDOT Specifications	(1989 Edition) Standard Specifications for Road and Bridge Construction

1.3 COORDINATION WITH LOCAL OFFICIALS

The Contractor shall establish contacts and coordinate his activities throughout the contract period with the following local officials:

Point of Contact	Company Name and Address	Phone Number
Lou Capone	Conectiv Power Delivery 420 Route 9 North Cape May Court House Cape May, NJ 08210	609-463-3817
Wayne Winn Construction Supervisor	South Jersey Gas Co. 1708 Route 9 North Swainton, NJ 08210	609-465-2900 Ext. 13
Barry Lewin	Verizon Jimmy Leeds Road Absecon, NJ 08201	609-748-9916
Jerome Inderwies	City of Cape May Mayor	609-884-9535
Robert Smith	City of Cape May	609-884-9570

Superintendent of Public Works		
Dave Carrick Superintendent	City of Cape May Water Utility	609-884-9575
Bob Dietz	U.S. Coast Guard Training Center	609-898-6404/6402
Scott Mauger	Cape May Point State Park PO Box 107 Cape May Point, NJ 08212	609-884-2159
Malcolm Fraser	Mayor, Borough of Cape May Point Post Office Drawer 490 Cape May Point, NJ 08212	609-884-2080
Jay Laubengeyer	Director, The Nature Conservancy, Delaware Bayshores Office 2350 Route 47 Delmont, NJ 08314	609-861-0600

1.4 CONTRACTOR ACCESS

Access to the work site is available by land and water unless otherwise indicated. Access to the shorefront is available in the locations indicated on the drawings. Access to the borrow area shall only be by water. The Contractor shall obtain all permits and coordinate fully with the local officials when it is necessary to cross the boardwalk. Any materials required to establish or stabilize access points for vehicle use shall be provided and removed by the Contractor. The Contractor shall be responsible for protecting all existing structures from damage throughout the entire contract, and shall maintain all access points in accordance with Section 01355 ENVIRONMENTAL PROTECTION. Any additional parking that the Contractor requires, outside the work limits, shall be coordinated directly with the appropriate local officials.

1.5 ACCESS RESTRICTIONS

Utilities and structures exist on the landward side of existing dunes throughout the project. The Contractor is prohibited from operating in these areas except where absolutely necessary to complete the contract work, e.g. for construction of crossovers. This access is subject to the approval of the COR. The COR may disapprove this access if deemed unnecessary to complete the contract work.

1.6 NOISE RESTRICTIONS

The Contractor shall be required to comply with the Cape May City code regarding noise for work between Stations 78+00 to 196+00 of survey baseline No. 1 at all times during the contract period.

1.7 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-07 Certificates

Temporary Facilities Layout; G,COR.

The Contractor shall submit to the Contracting Officer for approval prior to start of work, his plans showing the layout of all temporary facilities including material storage areas, staging areas and the proposed alignment of all safety and security fencing to be used for this contract. The temporary facilities layout shall also show the locations of all Contractor access points to be used for the contract work.

PART 2 PRODUCTS

2.1 GOVERNMENT FIELD OFFICE

The Contractor shall furnish a Government project office for the length of the contract within 1/4 mile of the work area. The office shall have a minimum floor area of 840 square feet, locking doors, and partitioned restroom facilities. The office shall have sufficient lighting to supply 150 foot-candles at the desk top level and shall be supplied with 110 volt and 220 volt electrical outlets as required for heating, air conditioning, lighting, water cooler, and other accessories. The exterior of the office shall be equipped with flood lights to provide security lighting during hours of darkness. Weekly janitorial services shall be supplied during normal working hours. The Contractor shall provide potable water (hot and cold), provide for treatment of sewage, and provide permanent electric and telephone services, all in accordance with applicable local municipal, county and State codes. If a trailer is provided, it shall be new or recently renovated to a like-new condition subject to the approval of the Contracting Officer.

2.1.1 Office Equipment

The following office equipment shall be provided by the Contractor for the Government field office:

a. Two desks having 60-inch by 30-inch tops, with lockable drawers; two swivel chairs; and two tables with 60-inch by 30-inch laminated tops;

b. One 96-inch by 48-inch conference table with ten chairs;

c. Telephones: Two cellular telephones with unlimited calling area and message capability, and, three land telephone lines, two for office

personel and one for the fax machine, as specified below for the computers and fax machine;

d. Two fire resistant, four-drawer, lockable legal size filling cabinet, two sets;

e. Shelf set, two shelves high, each measuring 12-inch deep by 3-feet long, one per desk;

f. Three waste baskets;

g. Electric water cooler and bottled water service for the life of the contract;

h. Vertical filing plan rack for two sets of 28-inch by 40-inch plans each rack;

i. Copier, Konica Model 3290 desk top copier, or approved equal, including adequate supplies and service agreement;

j. Fax Machine, Xerox Model N58, or approved equal, with dedicated telephone line, adequate supplies and fax machine service agreement;

k. Two portable two-way marine radios with chargers, Motorola Triton MP+, or approved equal, and shall operate on the Contractor`s working frequencies;

l. Two Personal Computers, Pentium IV, with a clock speed of at least 1.8 GHz, 256 megabyte RAM, 20 gigabyte hard disk drive, CD-RW drive, a 56k bps fax/modem, cable/DSL connection, 10/100 Ethernet card, and a laser jet printer. Two dedicated telephone lines shall be provided, one for each computer. The following software shall be included: MS Windows XP Operating System;

m. Countertop microwave oven, with digital display, turntable, interior light, and a minimum 0.6 cubic feet capacity;

n. Compact refrigerator, with 1.58 cubic foot capacity, and ice tray;

NOTE: All office equipment shall be in new or like new condition. Computers shall be shipped to the following address:

U.S. Army Corps of Engineers
Information Management Office
100 Penn Square East
Wanamaker Building
Philadelphia, PA 19107

Upon completion of loading the computers with Government furnished software, the Contractor shall provide for transportation of the computers from the Philadelphia District office to the field offices at the project site.

2.2 SAFETY FENCE

Temporary safety fence shall be 4-foot high plastic fencing, color orange. Fence posts shall meet the requirements of Section 907.02 of the NJDOT Specifications, and all other required accessories as recommended by the fence manufacturer for a complete installation.

2.3 SECURITY FENCE

Security fence shall be 8-foot high chain-link fencing with steel or aluminum posts, top and bottom rails, locking gates, and all other required accessories as recommended by the fence manufacturer for a complete installation.

PART 3 EXECUTION

3.1 STAGING AND STORAGE AREAS

Upland staging areas and material storage areas on the beach are available and their locations are indicated on the contract drawings. The storage areas on the beach, adjacent to the outfall extension work locations, are to be used for storage for the outfall extension work only. Upon completion of that work in a particular location, these storage areas shall be sifted clean of debris so that there is at least two feet of clean sand left in place.

3.2 CONTRACTOR'S PROJECT OFFICE

The Contractor shall establish at the site of the work a project office equipped and staffed to efficiently conduct the work under this contract and provide essential information to the Contracting Officer or its authorized representative. The Contractor shall keep at all times at its office a copy of all drawings, specifications, and other pertinent information, and shall at all times give the Contracting Officer access thereto. The Contractor's office shall be equipped with a desk, chair, copying machine, and telephone facilities which shall be available for use by the Contracting Officer.

3.3 GOVERNMENT FIELD OFFICE

3.3.1 General

The Contractor shall provide and maintain a field office for the sole use of the Contracting Officer's representatives at the location indicated on the contract drawings. The office shall be complete and ready for occupancy not later than 15 days after receipt of notice to proceed, or prior to the transport of any equipment on site. The Government field office shall remain in place 30 days after the final demobilization.

3.3.2 Utilities

The Contractor shall provide hot and cold potable water, provide for treatment of sewage, and provide permanent electric and telephone services, all in accordance with applicable local municipal, county and state codes.

All utility costs arising from the use of the office, including telephone cost, shall be borne by the Contractor.

3.3.3 Janitorial Services

The Contractor shall provide all janitorial supplies and services for the office facilities to include as a minimum, weekly sweeping, dusting, emptying of waste baskets, trash collection, servicing of toilets, mopping of all floors, sterilization of toilet seats and monthly waxing of all tile floors and washing of windows. The Contractor shall also provide for snow plowing of the parking area, shoveling of walkways, and major maintenance to the office and its utilities.

3.4 SECURITY FENCE

The Contractor shall erect a security fence to enclose the Contractor`s project office, the Government field office, and the Contractor's upland staging area(s). The Contractor's upland staging area(s) and shall be lighted during hours of darkness. This fence shall enclose and shall include appropriate gates with locks for both vehicles and employees. Posts shall be installed at maximum 10-foot intervals in the ground. Installation of all security fencing materials shall be in accordance with the fence manufacturer's printed instructions.

3.5 SAFETY FENCE

The Contractor shall erect and maintain throughout the contract period a temporary safety fence around all material storage areas located on the beach and around beachfill outlet pipe work areas. Temporary safety fencing shall be erected to safeguard the public and prevent any public access to the storage and work areas on the beach. The fence shall be removed and the area along the fence line shall be restored to its original condition at the conclusion of construction operations.

3.6 PROJECT AND SAFETY SIGNS

The Contractor shall provide and erect no later than 10 days from notice to proceed at the location designated by the Contracting Officer, the project and safety signs shown on the sketches in Section 00830 of this contract.

The project sign shall include the following project sponsors:

State of New Jersey Department of Environmental Protection

In addition, the Contractor shall include the Philadelphia District's website address on the project sign, and list the respective state officials, that part of the funding for the project is being provided for, all in a manner and as directed by the COR.

3.7 REMOVAL AND RESTORATION

Removal of all temporary construction and restoration of the work site and access points upon completion of the contract shall be in accordance with the requirements of Section 01355 ENVIRONMENTAL PROTECTION.

3.8 MEASUREMENT AND PAYMENT

No separate measurement or payment will be made for work performed under this section and all costs in connection therewith shall be included in the costs of all the bid items.

-- End of Section --

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SECTION 01720

SURVEY REQUIREMENTS

PART 1 GENERAL

1.1 SCOPE OF SECTION

The work covered by this section consists of furnishing all labor, materials, plant and equipment, and performing all operations required in conducting before- and after-dredging surveys of the beachfill and borrow area.

1.2 REFERENCES

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

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 1110-2-1003	(Jan. 2002) Hydrographic Survey Manual
EM 1110-1-1005	(31 Aug 1994) Topographic Surveying Manual

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

NOTE: Any submittals classified as "SD-01 Preconstruction Submittals" require approval prior to mobilization to the contract work site. All other submittals, classified as "SD-02" through "SD-11," require approval prior to commencing the particular task to which the submittal is associated.

SD-07 Certificates

Qualifications; G,DO.

Provide qualifications of the independent licensed surveyor(s) for land and hydrographic surveying.

Preliminary Pre-Placement Condition Surveys; G,COR.

All raw and edited data, in HYPACK format (see format a. under "Data Submission," shall be submitted to the COR on a daily basis.

Final Pre-Placement Condition Surveys; G,DO.

The final pre-placement condition survey data shall be submitted within 10 business days after completion of the surveys. Data submittal shall be submitted as specified herein.

Before- and After-Dredging Surveys of Borrow Area; G,DO.

Before-dredging survey data of the borrow area shall be submitted within 5 business days after completion of the surveys. After-dredging survey data of the borrow area shall be submitted within 5 business days after completion of the surveys. Data shall be submitted as specified herein.

Before- and After-Beachfill Surveys; G,DO.

The before-beachfill survey data of a particular location shall be submitted within 5 business days after completion of the surveys. After-beachfill survey data shall be submitted within 5 business days after completion of the surveys. A separate set of before and after surveys shall be prepared for the scour hole. That survey data shall be submitted within 5 business days after completion of those surveys. The surveys shall be performed as specified in Special Clause: QUANTITY SURVEYS and as specified herein. Data shall be submitted as specified herein.

Metadata; G,DO

Metadata shall be submitted within 14 business days after completion of beachfill placement operations.

SD-03 Product Data

Surveying Procedures and Equipment; G,DO.

All surveying procedures, methods, and equipment for landward beach surveys, hydrographic surveys, and tidal monitoring, shall be reviewed and approved by the Government Survey Point of Contact prior to the start of any type of surveying work.

1.4 DIFFERENTIAL GLOBAL POSITIONING SYSTEM(DGPS) EQUIPMENT

The Contractor must have a differential GPS, in accordance with the requirements for project classifications for "Navigation and Dredging Support Surveys" as referenced in the Corps of Engineers Hydrographic Survey Manual EM 1110-2-1003. The Contractor shall provide real time positioning of the dredge on a computer screen, during dredging, and have the capability of playback in 15 minute intervals. The position must be recorded on a disk every 15 minutes and submitted to the Contracting Officer on a daily basis.

1.5 HYDROGRAPHIC SURVEY EQUIPMENT

Hydrographic Surveys will be conducted to meet USACE Performance Standards for Navigation and Dredging Support, as defined in the Hydrographic Surveying Manual EM 1110-2-1003. Surveys will be performed by single transducer sounding techniques, multi-beam sweep type surveys or both. Bottom soundings will be obtained by the single beam fathometer operating at a frequency ranging from 190 to 210 Khz. When utilizing multi-beam technology, the operating frequency will range from 180 to 250 Khz. All fathometers will be calibrated following procedures outlined in the referenced EM.

1.6 QUALIFICATIONS OF SURVEYOR

All surveys must be performed by an independent survey company. All land surveys shall be performed under the direction and supervision of a

Professional Licensed Surveyor with 5 years current experience in beach profiling. All hydrographic surveys shall be conducted under the direction and supervision of a Surveyor certified by the American Congress on Surveying and Mapping (ACSM) as an In-Shore Hydrographer, or by a Professional Licensed Surveyor with a minimum of 5 years documented experience in a hydrographic surveying environment similar in nature to the surveys required under this Contract. Surveyors shall be New Jersey licensed surveyors.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL SURVEY REQUIREMENTS

The Contractor shall be responsible for conducting all surveys required to demonstrate that the construction is in compliance with the specified tolerances and the lines, grades, and elevations shown on the drawings.

3.2 PRE-PLACEMENT CONDITION SURVEYS

3.2.1 General

The beachfill area conditions are dynamic in nature. Conditions existing during the preparation of this contract may not be an accurate representation of the beachfill area conditions existing at the commencement of beachfill operations. Consequently, the Contractor shall obtain pre-placement condition survey cross sections. If Option 1 is awarded the Contractor shall prepare a second set of pre-placement conditions survey cross sections for Area No. 3 prior to the placement of any beachfill in that area, and subject to the requirements specified herein.

3.2.2 Completion Time Requirements

The pre-placement condition surveys shall be completed, in Area Nos. 1, 2 and 3 (if Option 1 is awarded), a maximum of 45 calendar days prior to starting beachfill placement and a minimum of 20 calendar days prior to starting beachfill placement.

3.2.3 Locations of Survey Lines

The cross sections shall be obtained at the locations given in Section 00880 PRE-PLACEMENT CONDITION SURVEY CROSS SECTION LOCATIONS of this specification and shall progress from: Station 00+00 to Station 196+90 in Area No. 1; Station 67+50 to Station 118+61 in Area No. 2; and Station 67+50 to Station 7+52 in Area No. 3.

3.2.4 Description of Required Survey Lines

The survey cross sections shall be long lines, and shall extend from the survey baseline to a minimum 2,500 feet seaward, except for station 6+16.59 to 78+27.11 of Survey Baseline No. 1, where the length will be 2500 feet measured from the construction baseline.. Survey cross sections for Station 7+52 to 80+00 of Baseline No. 2 shall also extend to the landward limit of work. The origin of the new profile lines shall be the survey baseline, as shown on sections on the contract drawings.

3.2.5 Intervals Required

Elevations along the cross-sections shall be taken at a maximum of 10 foot intervals, with additional elevations taken as necessary to describe all hydrographic features. The topographic portion of the cross-sections shall include elevations taken at a maximum spacing of 10 foot intervals with additional elevations taken at all slope breaks and all other topographic features.

3.2.6 Quality Control

Data from previous surveys will be provided to the Contractor in advance of the pre-placement surveys. The Contractor shall overlay the previous surveys with pre-placement surveys as a quality control measure.

3.3 BEFORE- AND AFTER-BEACHFILL SURVEYS

3.3.1 Completion Time Requirements

Before-beachfill surveys of a location shall be conducted no more than 10 calendar days before after-beachfill surveys of that location.

3.3.2 Locations of Survey Lines

The survey cross-sections shall be taken at the locations indicated in Section 00890.

3.3.3 Description of Required Survey Lines

The survey cross-sections shall extend 1,200 feet from the survey baseline, except for station 6+16.59 to 78+27.11 of Survey Baseline No. 1, where the length will be 1200 feet measured from the construction baseline. Survey cross sections for Station 7+52 to 80+00 of Baseline No. 2 shall also extend to the landward limit of work.

3.3.4 Intervals Required

Elevations along the cross-sections shall be taken at a maximum of 10 foot intervals, with additional elevations taken as necessary to describe all hydrographic features. The topographic portion of the cross-sections shall include elevations taken at a maximum spacing of 10 foot intervals with additional elevations taken at all slope breaks and all other topographic features.

3.4 BEFORE- AND AFTER-DREDGING SURVEYS OF THE BORROW AREA

3.4.1 Completion Time Requirements

Before-dredging surveys of the borrow area shall be conducted a minimum of 15 calendar days prior to dredging the borrow area. After-dredging surveys of a location shall be conducted within 10 days of completion of dredging of the borrow area.

3.4.2 Locations of Survey Lines

The survey lines shall be taken along the same lines as the surveys shown on the contract drawings.

3.4.3 Intervals Required

The survey data points shall be taken at the same intervals as the surveys shown on the contract drawings.

3.5 CONTROL

Survey control will be established from the existing survey baseline control description data information as shown on the contract drawings. The Contractor shall utilize North American Vertical Datum (NAVD) 1988 as the vertical datum for elevation and depth references for all cross sections, and shall be responsible for obtaining necessary ocean tide height measurements during the survey periods to assure that accurate adjustments are made to the observed depths to account for tidal variations in water level. The Contractor shall utilize New Jersey State Plane Coordinate System (NAD 1983) as the horizontal reference datum.

3.6 TOLERANCES

The landward portion of the profile lines shall be surveyed utilizing surveying procedures and methodology that meet or exceed accuracy tolerances of +/- 0.20 feet in the vertical and +/- 0.50 feet in the horizontal, with a 95% confidence level. All topographic or land based surveys performed in conjunction with this Contract shall meet all criteria outlined in EM 1110-1-1005. Horizontally, the vessel will be kept to within +/- 25 ft of the cross section line. In areas where obstructions are present, complete notes shall be taken explaining the offset.

3.7 PROCEDURES, METHODS, AND EQUIPMENT

3.7.1 Approvals Required

All surveying procedures, methods and equipment for landward beach surveys, hydrographic surveys and tidal monitoring (if applicable), shall be reviewed and approved by the Government Survey Point of Contact prior to the conduct of any type of surveying work. This review process shall also include the review and acceptance of the Surveyor's Qualifications, as defined in the Paragraph entitled: "Qualifications of Surveyor".

3.7.2 Overlap of Survey Techniques

The minimal overlap between the land and offshore surveys, or any other change in survey technique, shall be 50 feet (including at least 10 points). Horizontally, overlap points must be kept within +/- 25 ft of the matched method.

3.7.3 Hydrographic Surveying Techniques

The hydrographic or offshore portion of beach profile lines shall be surveyed using a towed sea sled, direct measurement methodologies or hydrographic techniques with Real Time Kinematic/On the Fly (RTK/OTF) capabilities. If a towed sea sled method is used, the horizontal and vertical positioning shall be obtained by utilizing either Differential GPS, with RTK/OTF capabilities to obtain orthometric heights in the required datum, NAVD88. The Contractor shall use the latest NGS separation model to ensure accuracy levels are met. Update rates from the GPS receiver to the data collection processor shall be collected a a minimum of 5 Hz. to a maximum interval of 20 Hz, to minimize the latency error. The DGPS data shall be augmented by heave/pitch/roll information to smooth the

vertical position in the post-processing of the data. The GPS base station shall be located within 6.2 miles (10 km) of the hydrographic line being surveyed. The land and hydrographic portions of the survey shall be conducted at tidal stages to ensure overlap is obtained. The OTF system must be capable of tracking all satellites in view, minimum of five. Mask angles are not to be less than 15 degrees.

3.8 DATA SUBMISSION

3.8.1 General

Horizontal distances of each survey point shall be referenced as negative seaward from the established Corps baseline point, and positive landward from the baseline. All survey data shall be recorded digitally on CD-ROM in ASCII text format. All profile survey data shall be submitted to the Government in all of the following formats:

a. Raw and edited HYPACK project files and data collector files.

b. ASCII files for distance offset from baseline format, as shown on the attached sheets.

c. BMAP Free Format ASCII files using distances offset from the baseline (X) and elevation (Z1), as shown on attached sheets.

d. One ASCII file containing the following for all profile lines: profile ID, survey origin, and grid azimuth with respect to the horizontal reference coordinate system.

e. Plotted cross section drawings in AutoCAD 2000 format for each cross section survey taken. The grid spacing shall be 10 feet in the vertical and 100 feet in the horizontal. Each drawn cross section shall show the station that it was taken from.

f. ASCII files XYZ format, as shown on attached sheets.

All borrow area survey data shall be submitted to the Government in the following format:

Data for the pre-dredge and post-dredge Borrow Area, shall be provided in digital XYZ format and HYPACK files, both raw and edited. Sample file for XYZ format is shown on attached sheets.

3.8.2 Timely Submission of Survey Data

Survey data, unless specified otherwise, shall be submitted within 5 business days of completion of the surveys.

3.9 METADATA SUBMISSION

The data provided by the Contractor is not considered complete without Federal Geographic Data Committee (FGDC) compliant metadata file(s). Metadata Generation Software, Corpsmet95, can be downloaded via http://corpsgeo1.usace.army.mil. The Contractor shall provide metadata file(s) for all geospatial data produced under this Contract. Geospatial data is defined as information that identifies the geographic location and characteristics of natural or constructed features and boundaries on the earth, which also includes aerial photography. Geospatial data affected by these requirements are those generated for use in a : Geographic

Information System (GIS), Land Information System (LIS), remote Sensing or Image processing system, Computer-Aided Design and Drafting (CADD) system, Automated Mapping/Facilities (AM/FM) system and other computer systems that employs or references data using either absolute, relative or assumed coordinates.

The metadata file(s) must comply with Federal Geographic Data Committee (FGDC) Content Standards for Digital Geospatial Metadata Version 1.0 or higher. Corpsmet95 generates final metadata files in a ".met" file type. If the contractor chooses to use the Corpmet95 Metadata Generation Software, in addition to the ".met" file, metadata files should be provided as ".txt" or ".html". If another generation tool is used other than Corpsmet95, the ".txt" or ".html" file type would be sufficient.

3.10 MEASUREMENT AND PAYMENT

The work specified in this section for surveying will not be measured for payment. All costs in connection therewith shall be considered incidental to those Bid Items to which the surveys are incidental.

-- End of Section --

SURVEY DATA FORMATS

a. Distance offset from Baseline Format (Comma Delimited)

```
7202.13      Station in feet (Do not include "+")
s sf1        Program requirement (Shall be the same for all stations)
58,5.9       Offset Right Landward, Elevation
50,6.3             "
30,7.5             "
17,6.0             "
10,4.6             "
5,4.0              "
-15,1.7      Offset Left Seaward, Elevation
-25,0.7            "
-40,-0.8           "
-50,-0.9           "
-100,-1.1          "
-250,-0.4          "
-600,-0.7          "
-1500,-3.2         "
E            End of Cross section
7729.45      Station in feet (Do not include "+")
s sf1        Program requirement (Shall be the same for all stations)
Etc.
```

b. Easting, Northing, and Elevation Format or XYZ Format(Comma Delimited)

```
7202.13                     Station in feet (Do not include "+")
382475.74,30975.42,-37.3    Easting, Northing, and Elevation
382475.85,30974.85,-37.3          "
382476.06,30973.78,-37.4          "
382476.16,30973.25,-37.4          "
382476.28,30972.59,-37.5          "
382476.38,30972.10,-37.5          "
382476.50,30971.45,-37.4          "
382476.60,30970.98,-37.6          "
382476.73,30970.35,-37.4          "
382476.83,30969.84,-37.6          "
382476.96,30969.22,-37.3          "
382477.07,30968.68,-37.5          "
382477.20,30968.06,-37.3          "
382477.30,30967.52,-37.4          "
382477.40,30966.88,-37.2          "
382477.48,30966.32,-37.1          "
7729.45                     Station in feet (Do not include "+")
382475.74,30975.42,-37.3    Easting, Northing, and Elevation
382475.85,30974.85,-37.3          "
Etc.
```

c. BMAP Free Format

```
CM 00400 031704        Line Name; CM for Cape May; Station; Date
        <TAB>20             Number of points in cross section
827.4000<TAB>9.6200         Offset Distance from baseline, Elevation
840.3000<TAB>8.6100                  "
848.6000<TAB>6.6000                  "
```

859.7000<TAB>5.4900 "
871.4000<TAB>4.2900 "
883.3000<TAB>3.1700 "
894.1000<TAB>2.4200 "
906.4000<TAB>1.6700 "
918.6000<TAB>0.6100 "
929.8000<TAB>-0.6700 "
942.9000<TAB>-1.8200 "
955.3000<TAB>-2.7400 "
956.0000<TAB>-2.8600 "
967.8000<TAB>-3.0100 "
980.0000<TAB>-2.9900 "
992.4000<TAB>-3.1800 "
1004.3000<TAB>-3.6000 "
1016.5000<TAB>-3.6900 "
1028.4000<TAB>-4.2000 "
1047.8000<TAB>-4.4200 "

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SECTION 01780

AS-BUILT DRAWINGS

PART 1 GENERAL

1.1 SCOPE OF SECTION

The work specified in this section includes the preparation of as-built drawings complete, as a requirement of this contract.

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-07 Certificates

Progress Prints; G,COR.

The Contractor shall submit as-built marked prints with submission of each monthly pay estimate.

SD-11 Closeout Submittals

As-Built Drawings; G,COR.

The Contractor shall submit as-built drawings as specified herein.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 PROGRESS MARKED-UP AS-BUILT PRINTS

The Contractor shall mark-up one set of paper prints to show the as-built conditions for the project. These as-built marked prints shall be kept current and available on the jobsite at all times. All changes from the contract plans which are made in the work or additional information which might be uncovered in the course of construction shall be accurately and neatly recorded as they occur by means of details and notes. The as-built marked prints will be jointly inspected for accuracy and completeness by the Contracting Officer's representative and a responsible representative of the Construction Contractor prior to submission of each monthly pay estimate. The drawings shall show the following information, but not be limited thereto:

a. The location and description of any utility lines or other

installations of any kind or description known to exist within the construction area. The location shall include dimensions to permanent features.

b. The location and dimensions of any changes within the building or structure.

c. Correct grade or alignment of roads, structures, or utilities if any changes were made from the contract plans.

d. Correct elevation if changes were made in site grading.

e. Changes in details of design or additional information obtained from working drawings specified to be prepared and/or furnished by the Contractor including but not limited to fabrication, erection, installation plans and placing details, pipe sizes, insulation material, dimensions of equipment foundations, etc.

f. The topography and grades of all drainage installed or affected as part of the project construction.

g. All changes or modifications which result from the final inspection.

h. Where contract drawings or specifications allow options, only the option selected for construction shall be shown on the as-built prints.

3.2 PRELIMINARY SUBMITTALS

The Contractor shall prepare the progress as-built prints and these shall be delivered to the Contracting Officer at the time of final inspection for his review and approval. These as-built marked prints shall be neat, legible and accurate. The review by Government personnel will be expedited to the maximum extent possible. Upon approval, the as-built marked prints will be returned to the Contractor for use in preparation of final as-built drawings. If upon review, the drawings are found to contain errors and/or omissions, they will be returned to the Contractor for corrections. The Contractor shall complete the corrections and return the as-built marked prints to the Contracting Officer within ten (10) calendar days.

3.3 DRAWING PREPARATION

3.3.1 General Requirements

Upon approval of the as-built prints submitted, the Contractor will be furnished the contract drawings on compact disc (CD) in AutoCAD 2002 format with all amendments incorporated. The drawing files shall be modified as necessary to correctly show all the features of the project as it has been constructed by bringing the contract set into agreement with the approved as-built prints, adding such additional drawings as may be necessary.

3.3.2 Modification of Contract Drawings

Only personnel proficient in the preparation of engineering drawings and the use of AutoCAD 2002, to standards satisfactory and acceptable to the

Contracting Officer, shall be employed to modify the contract drawings or prepare additional new drawings. All additions and corrections to the contract drawings shall be done using AutoCAD 2002 in a professional manner, and shall match the existing linework and/or lettering used on the drawings in type, density, size and style. The title block to be used for any new as-built drawings shall be the same as that used on the original drawings.

3.3.3 Identification of Final As-Built Drawings

When final revisions have been completed, each drawing shall be identified with the words "RECORD DRAWING AS-BUILT" followed by the name of the General Contractor in letters at least 3/16-inch high. All contract drawings shall be annotated and dated in the revision block as either "AS-BUILT DRAWING" denoting no revision on the sheet or "REVISED AS-BUILT DRAWING" denoting one or more revisions. For drawings having as-built revisions, a revision number contained within a 3/16 inch high triangle shall be included in the revision block. All changes to drawings shall be encircled with a series of short arcs forming a "cloud", with the triangle revision number positioned immediately next to each cloud.

3.4 FINAL REQUIREMENTS

After receipt by the Contractor of the approved as-built prints and the original contract drawings, the Contractor shall within 60 days, make the final as-built submittal. This submittal shall consist of the completed as-built drawings on compac disk (CD) in AutoCAD 2002 format, one full-size mylar copy of the drawings, and the return of the approved as-built prints. All drawings shall be complete in all details. All AutoCAD files and reproducible drawings will become the property of the Government upon final approval. Failure to submit the above as-built information as required will be cause for withholding any payment due the Contractor under this contract. The Contracting Officer will review all as-built drawings for accuracy and conformance to the above requirements. The Contractor shall make all corrections, changes, additions, and deletions required to meet these standards. Approval and acceptance of final as-built drawings will be required before final payment is made to the Contractor.

3.5 MEASUREMENT AND PAYMENT

No separate measurement or payment will be made for the work specified in this section and all costs in connection therewith shall be included in the costs of all the bid items.

-- End of Section --

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SECTION 02220

EXCAVATION, TRENCHING AND BACKFILLING

PART 1 GENERAL

1.1 SCOPE OF SECTION

The work covered by this section consists of providing all labor, materials, plant and equipment, and performing all operations for excavation, trenching and backfilling required for the extension of existing stormwater pipes with new ductile iron pipe and for the excavation and reconstruction of portions of dunes, as specified herein and shown on the drawings.

1.2 REFERENCES

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

ASTM INTERNATIONAL (ASTM)

ASTM D 2487	(1998) Classification of Soils for Engineering Purposes (Unified Soil Classification System)

1.3 DEFINITIONS

1.3.1 Satisfactory Materials

Satisfactory materials shall consist of any material classified by ASTM D 2487 as GM, GC, GW, GP, SM, SW, SP, and SC.

1.3.2 Unsatisfactory Materials

Unsatisfactory materials shall be materials that do not comply with the requirements for satisfactory materials. Unsatisfactory materials include but are not limited to those materials containing roots and other organic matter, trash, debris, frozen materials, and materials classified in ASTM D 2487 as CL, CH, MH, ML, PT, OH and OL. Unsatisfactory materials shall also include man-made fills, refuse or backfills from previous construction.

1.3.3 Cohesionless and Cohesive Materials

Cohesionless materials shall include materials classified in ASTM D 2487 as GW, GP, SW and SP. Cohesive materials include materials classified as GC, SC, ML, CL, MH and CH. Materials classified as GM and SM shall be identified as cohesionless only when the fines are nonplastic.

PART 2 PRODUCTS

PART 3 EXECUTION

3.1 EXCAVATION

3.1.1 General

Excavation will be unclassified regardless of the nature of the material encountered and shall be performed to the lines, grades, and elevation indicated. During excavation, material satisfactory for backfilling trenches shall be stockpiled in an orderly manner and at a distance from the edges of trench equal to at least one-half the depth of excavation, but in no case closer than 2 feet. Unsatisfactory excavated material shall be removed from the site and disposed of properly at the Contractor's expense. Any additional satisfactory material needed shall be provided by the Contractor, at his expense. Grading shall be done as may be necessary to prevent surface water from flowing into the excavation, and any water accumulating therein shall be removed to maintain the stability of the bottom and sides of the excavation.

3.1.2 Trench Excavation

3.1.2.1 General

The trench width below the top of pipe shall not exceed 24 inches plus the outside diameter (O.D.) of the pipe. Trenches 3 feet deep or more shall be shored, cut back to a stable slope, or provided with equivalent means of protection for workers who may be exposed to moving earth or cave-ins. Vertical trench walls more than 5 feet high shall be shored in accordance with paragraph "Shoring". Trench walls which are cut back shall be excavated to at least the angle of repose of the soil. Special attention shall be given to slopes which may be adversely affected by weather or moisture content.

3.1.2.2 Shoring

Shoring, including sheet piling, shall be furnished and installed as necessary to protect workmen and adjacent structures and utilities. Shoring, bracing, and sheeting shall be removed as excavations are backfilled, in a manner to prevent caving.

3.1.2.3 Bottom Preparation

The bottoms of trenches shall be accurately graded to provide uniform bearing and support for the bottom quadrant of each section of the pipe. Stones of 1-inch or greater in any dimension shall be removed to avoid point bearing.

3.1.3 Dune Excavation

Existing dunes indicated to be excavated shall be removed to the grades as indicated on the drawings. Existing dune material may be reused to rebuild

the core of new dunes. Reused dune material shall be limited to allow for a minimum height of 5-foot of new beachfill material from the borrow area. All excess excavated material shall be removed from the site and disposed of properly at the Contractor's expense.

3.1.4 Stockpiles

Stockpiles shall be kept in a neat and well drained condition, giving due consideration to drainage at all times.

3.2 BACKFILLING

Prior to backfilling over completed work the Contractor shall notify the Contracting Officer's on-site representatives. The Contracting Officer's on-site representative will inspect the excavation and determine if it is in compliance with the contract requirements. Any areas determined not to be in compliance, shall be reworked and reinspected prior to backfilling.

3.3 MEASUREMENT AND PAYMENT

3.3.1 Extension of Stormwater Outfalls

The work specified in this section in connection with the extending the stormwater outfall pipe will not be measured for payment. All costs in connection with this work shall be included in the unit price for "Extension of Stormwater Outfalls," Option 1 Bid Item No. 2c. (if Option 1 is awarded) as specified in Section 02400 STORMWATER OUTFALL PIPES.

3.4 Dune Excavation

The work specified in this section in connection with dune excavation will not be measured for payment. All costs in connection with this work shall be included in the unit price for "Beachfill - Area #3", Option 1 Bid Item No. 2a. (if Option 1 is awarded) as specified in Section 02390 BEACHFILL.

-- End of Section --

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SECTION 02373

GEOTEXTILE

PART 1 GENERAL

1.1 SCOPE OF SECTION

The work covered by this section consists of furnishing all labor, material, and equipment, and performing all operations required for providing geotextile under the vehicle dune crossovers as indicated on the contract drawings.

1.2 REFERENCES

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

ASTM INTERNATIONAL (ASTM)

ASTM D 3786	(1987) Hydraulic Bursting Strength of Knitted Goods and Nonwoven Fabrics - Diaphragm Bursting Strength Tester Method
ASTM D 4354	(1999) Sampling of Geosynthetics for Testing
ASTM D 4355	(1999) Deterioration of Geotextiles from Exposure to Ultraviolet Light and Water (Xenon-Arc Type Apparatus)
ASTM D 4491	(1999a) Water Permeability of Geotextiles by Permittivity
ASTM D 4533	(1991; R 1996) Trapezoid Tearing Strength of Geotextiles
ASTM D 4632	(1991; R 1997) Grab Breaking Load and Elongation of Geotextiles
ASTM D 4751	(1999a) Determining Apparent Opening Size of a Geotextile
ASTM D 4759	(1988; R 1996) Determining the Specification Conformance of Geosynthetics
ASTM D 4833	(2000) Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products
ASTM D 4873	(2002) Identification, Storage, and

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Thread; G,DO

A minimum of 7 days prior to scheduled use, proposed thread type for sewn seams along with data sheets showing the physical properties of the thread.

SD-04 Samples

Quality Assurance Samples and Tests; G,DO

Samples for quality assurance testing; 7 days shall be allotted in the schedule to allow for testing.

SD-07 Certificates

Geotextile; G,DO

A minimum of 7 days prior to scheduled use, manufacturer's certificate of compliance stating that the geotextile meets the requirements of this section. For needle punched geotextiles, the manufacturer shall also certify that the geotextile has been continuously inspected using permanent on-line full-width metal detectors and does not contain any needles which could damage other geosynthetic layers. The certificate of compliance shall be attested to by a person having legal authority to bind the geotextile manufacturer. Certificate shall be a statement signed by an official authorized to certify on behalf of the manufacturer of the geotextile, attesting that the product meets specified requirements. The statement must be dated after the award of the contract, must state the Contractor's name and address, must name the project and location, and must list the specific requirements which are being certified.

1.4 DELIVERY, STORAGE AND HANDLING

Delivery, storage, and handling of geotextile shall be in accordance with ASTM D 4873.

1.4.1 Delivery

The Contracting Officer shall be notified a minimum of 24 hours prior to delivery and unloading of geotextile rolls. Rolls shall be packaged in an

opaque, waterproof, protective plastic wrapping. The plastic wrapping shall not be removed until deployment. If quality assurance samples are collected, rolls shall be immediately rewrapped with the plastic wrapping. Geotextile or plastic wrapping damaged during storage or handling shall be repaired or replaced, as directed. Each roll shall be labeled with the manufacturer's name, geotextile type, roll number, roll dimensions (length, width, gross weight), and date manufactured.

1.4.2 Storage

Rolls of geotextile shall be protected from construction equipment, chemicals, sparks and flames, temperatures in excess of 160 degrees F, or any other environmental condition that may damage the physical properties of the geotextile. To protect geotextile from becoming saturated, rolls shall either be elevated off the ground or placed on a sacrificial sheet of plastic in an area where water will not accumulate.

1.4.3 Handling

Geotextile rolls shall be handled and unloaded with load carrying straps, a fork lift with a stinger bar, or an axial bar assembly. Rolls shall not be dragged along the ground, lifted by one end, or dropped to the ground.

PART 2 PRODUCTS

2.1 GEOTEXTILE

Geotextile shall be a woven or nonwoven pervious sheet of polymeric material and shall consist of long-chain synthetic polymers composed of at least 95 percent by weight polyolefins, polyesters, or polyamides. The use of woven slit film geotextiles (i.e. geotextiles made from yarns of a flat, tape-like character) will not be allowed. Stabilizers and/or inhibitors shall be added to the base polymer, as needed, to make the filaments resistant to deterioration by ultraviolet light, oxidation, and heat exposure. Regrind material, which consists of edge trimmings and other scraps that have never reached the consumer, may be used to produce the geotextile. Post-consumer recycled material may also be used. Geotextile shall be formed into a network such that the filaments or yarns retain dimensional stability relative to each other, including the edges. Geotextiles shall meet the requirements specified in Table 1. Where applicable, Table 1 property values represent minimum average roll values (MARV) in the weakest principal direction. Values for AOS represent maximum average roll values.

TABLE 1
MINIMUM PHYSICAL REQUIREMENTS FOR DRAINAGE GEOTEXTILE

PROPERTY	UNITS	ACCEPTABLE VALUES	TEST METHOD
GRAB STRENGTH	LBS	200	ASTM D 4632
SEAM STRENGTH	LBS	180	ASTM D 4632
BURSTING STRENGTH	PSI	450	ASTM D 3786

TABLE 1
MINIMUM PHYSICAL REQUIREMENTS FOR DRAINAGE GEOTEXTILE

PUNCTURE	LBS	80	ASTM D 4833
TRAPEZOID TEAR	LBS	40	ASTM D 4533
APPARENT OPENING SIZE	U.S. SIEVE	70-100	ASTM D 4751
PERMITTIVITY	SEC -1	0.7	ASTM D 4491
ULTRAVIOLET DEGRADATION	PERCENT	50 AT 500 HRS	ASTM D 4355

2.2 THREAD

Sewn seams shall be constructed with high-strength polyester, nylon, or other approved thread type. Thread shall have ultraviolet light stability equivalent to the geotextile and the color shall contrast with the geotextile.

2.3 MANUFACTURING QUALITY CONTROL SAMPLING AND TESTING

The Manufacturer shall be responsible for establishing and maintaining a quality control program to assure compliance with the requirements of the specification. Documentation describing the quality control program shall be made available upon request. Manufacturing quality control sampling and testing shall be performed in accordance with the manufacturer's approved quality control manual. As a minimum, geotextiles shall be randomly sampled for testing in accordance with ASTM D 4354, Procedure A. Acceptance of geotextile shall be in accordance with ASTM D 4759. Tests not meeting the specified requirements shall result in the rejection of applicable rolls.

PART 3 EXECUTION

3.1 SUBGRADE PREPARATION

The surface underlying the geotextile shall be smooth and free of ruts or protrusions which could damage the geotextile. Any irregularities shall be removed so as to insure continuous, intimate, contact of the geotextile with all the surface. Any loose material, soft or low density pockets of material, shall be removed; erosion features such as rills, gullies, etc. shall be graded out of the surface before geotextile placement.

3.2 INSTALLATION

The Contractor shall notify the Contracting Officer a minimum of 24 hours prior to installation of geotextile. Geotextile rolls which are damaged or contain imperfections shall be repaired or replaced as directed. The geotextile shall be laid flat and smooth so that it is in direct contact with the subgrade. The geotextile shall also be free of tensile stresses,

folds, and wrinkles. The placement procedures require that the length of the geotextile be slightly greater than the dune cross-over or access road width. The Contractor shall adjust the actual length of the geotextile used based on initial installation experience. Temporary pinning of the geotextile to help hold it in place until the overlying material is placed will be allowed. The temporary pins shall be removed as the overlying materials are placed to relieve high tensile stress which may occur during placement of material on the geotextile. Other appropriate means to prevent movement such as sand bags and stone could also be used. Trimming of excess material shall be performed in such a manner that the geotextile shall not be damaged in any way. The geotextile shall be laid with the machine direction of the fabric parallel to the centerline of the cross-over or access road.

3.3 SEAMS

3.3.1 Overlap Seams

Geotextile panels shall be continuously overlapped a minimum of 24 inches at all longitudinal and transverse joints. Where seams must be oriented across the slope, the upper panel shall be lapped over the lower panel. If approved, sewn seams may be used instead of overlapped seams.

3.3.2 Sewn Seams

The stitch type used shall be a 401 locking chain stitch or as recommended by the manufacturer. Seam strength shall meet the minimum requirements specified in Table 1. The thread at the end of each seam run shall be tied off to prevent unraveling. Skipped stitches or discontinuities shall be sewn with an extra line of stitching with a minimum of 18 inches of overlap.

3.4 PROTECTION

The geotextile shall be protected during installation from clogging, tears, and other damage. Damaged geotextile shall be repaired or replaced as directed. Adequate ballast (e.g. sand bags) shall be used to prevent uplift by wind. The geotextile shall not be left uncovered for more than 4 hours after installation.

3.5 REPAIRS

Torn or damaged geotextile shall be repaired. Clogged areas of geotextile shall be removed. Repairs shall be performed by placing a patch of the same type of geotextile over the damaged area. The patch shall extend a minimum of 12 inches beyond the edge of the damaged area. Patches shall be continuously fastened using approved methods. The machine direction of the patch shall be aligned with the machine direction of the geotextile being repaired. Geotextile rolls which cannot be repaired shall be removed and replaced. Repairs shall be performed at no additional cost to the Government

3.6 COVERING

Geotextile shall not be covered prior to inspection and approval by the Contracting Officer. The geotextile shall be protected from damage during the placement of overlying materials primarily by limiting the height of drop of materials to no greater than 1-foot unless otherwise approved by the Contracting Officer. Any damage to the geotextile during placement of the overlying materials shall be repaired or replaced by the Contractor at his own expense.

3.7 MEASUREMENT AND PAYMENT

No separate measurement or payment will be made for the work specified in this section. All costs in connection with providing and installing geotextile shall be included in the contract prices of those items for which the geotextile is incidental.

-- End of Section --

SECTION 02390

BEACHFILL

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all labor, materials, plant and equipment, and performing all operations required for conducting pre-placement condition surveys, removal of the material from Borrow Area(s)located offshore, and placing the material on the beach and in the scour hole within the limits specified herein and shown on the drawings.

1.2 REFERENCES

The following references 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 422	(1990) Standard Method for Particle-Size Analysis of Soils

CODE OF FEDERAL REGULATIONS (CFR)

33 CFR 156	Oil and Hazardous Material Transfer Operations

U.S. ARMY CORPS OF ENGINEERS (COE-SOH)

EM 385-1-1	(Latest Rev.) Safety and Health Requirements Manual

1.3 REQUIRED ORDER OF WORK

The order of work shall be as specified in Section 01010 SUMMARY OF WORK.

1.4 CHARACTER AND LOCATION OF BORROW MATERIAL

1.4.1 Character of Borrow Material

The character of the material in Borrow Area(s)is believed to be as indicated by the results of Government-conducted sampling. Particle Size Distribution Curves and Gradation Curves are included in Section 00855, and Vibracore Logs are included on the drawings of this contract. The locations of the vibracore holes in the borrow areas are also shown on the drawings.

1.4.2 Location of Borrow Areas

The location of the borrow areas and the limits to which removal of material is permitted is shown on the drawings. The maximum allowable depth for removal of material from the borrow areas is as follows: -54 feet North American Vertical Datum (NAVD 88) for Borrow Areas 4 and -44 feet (NAVD 88)

for Borrow Area 5. Unless specifically directed by the Contracting Officer, no payment will be made for material removed from outside the limits of each borrow area.

1.4.3 Nature of Borrow Areas

The surveys of the borrow areas included in the plans were taken March 2004. However, the borrow area conditions are dynamic in nature, and the soundings in the plans may not be an accurate representation of the depths and conditions existing at the commencement of dredging operations in this contract. Before-dredging surveys and after-dredging surveys shall be conducted, as specified in Section 01720 SURVEY REQUIREMENTS.

Based on previous dredging in the borrow area, cobbles and/or other non-beachfill material having a 3-inch or greater diameter, have been found in the borrow area. The contractor shall submit a work plan that demonstrates to the satisfaction of the Contracting Officer, or his representative, that the proposed dredging method will exclude non-beachfill material with any dimension in excess of 1 inch from passing through to the area of sand placement. Any disposal of non-beachfill material associated with this work plan shall require disposal outside the beach and borrow area limits and shall be at no additional cost to the government.

The information depicted on the vibracore logs represent the results of subsurface explorations made on the dates indicated and can only be considered as conditions existing at that time.

1.5 SITE CONDITIONS

Bidders are expected to examine the site of the work in accordance with Contract Clause: SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK to determine the conditions affecting their operations. The entire work site is designated as a hard hat area in accordance with EM 385-1-1. Access to the beachfill site is available at the locations shown on the drawings. The Contractor shall be responsible for compliance with all applicable Federal, State, County, and local regulations regarding weight limitations and other vehicle restrictions regarding the use of these routes. The beach area in front of the Small Arms Range extending from Station -0+60 to Station 13+20 of Baseline No. 1 will be inaccessible to the Contractor between the hours of 7:00 a.m. and 4:30 p.m., Monday through Thursday, due to training operations and field firing of weapons. During these restricted times, a red flag will be displayed on the range flagpole. However, changes in this schedule may occur during the contract period. The Contractor shall coordinate with the U.S. Coast Guard point of contact listed in Section 01500: TEMPORARY CONSTRUCTION to determine any deviations from the above schedule. The Contractor shall schedule work in accordance with this restriction.

1.6 FUEL OIL HANDLING

The Contractor shall assure that all fuel oil transfer operations to or from his plant comply with all applicable Federal, State, and municipal laws, codes, and regulations. The Contractor shall incorporate in his accident prevention plan, required under Contract Clause: ACCIDENT PREVENTION, sufficient information to demonstrate compliance with 33 CFR 156 and all other applicable laws, codes, and regulations.

1.7 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-07 Certificates

Work Plan; G,DO.

The Contractor shall describe his proposed personnel, equipment, and methods for accomplishing the contract work including all option work (when and if awarded), and include the proposed methods for dune construction, existing dune excavation and access road construction. The Contractor shall include his proposed method for maintaining existing outfall drainage throughout the contract period.

Debris Prevention Plan; G,COR.

The Contractor shall devise a means and a monitoring program/method to ensure that debris is not deposited upon the beach and buried by beachfill material.

Qualifications; G,COR.

Provide qualifications of licensed surveyor for land and hydrographic surveying.

Pumpout Plan; G,COR.

If a hopper dredge is used for the contract work, the Contractor shall submit to the Contracting Officer for approval, prior to the start of work, its plan for pumpout of excavated material from the dredge to the beachfill area. The plan shall include the description, dimensions, and location of the proposed mooring facility.

Grade Stake Recovery Plan; G,COR.

Contractor shall submit a plan describing his procedures that will be used to ensure that all grade stakes placed on the beach during construction are subsequently removed.

SD-02 Shop Drawings

Borrow Areas; G,DO.

The Contractor shall provide a map of the borrow area, to scale, with the Contractor-assigned stationing and range information. This map will be used by the Government to identify the location of dredging on a daily basis. The Contractor shall indicate on that mapping which corner of the borrow area is 0,0.

SD-06 Test Reports

DGPS Positioning.

Records of position during dredging and overboard disposal operations shall be recorded on disk every 15 minutes and submitted to the Contracting Officer on a daily basis.

Test Reports; G,COR.

Copies of all laboratory and field test reports shall be submitted to the Contracting Officer within one week after completion of each test.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 DESCRIPTION OF WORK, REQUIRED ORDER OF WORK, AND RESTRICTIONS ON WORK

See Section 01010 SUMMARY OF WORK for "Description Of Work," "Required Order Of Work," and "Restrictions On Work."

3.2 DEDICATED PUBLIC SAFETY PERSONNEL

The Contractor shall provide a minimum of two public safety persons to patrol the perimeter of the closed beach area and direct the public to not enter the construction area. They shall have no other responsibilities. They shall be easily identified by wearing safety vests. These dedicated public safety personnel shall be provided between 8:00 am and 5:00 pm, during active construction operations.

3.3 PRE-PLACEMENT CONDITION SURVEYS

Pre-placement condition surveys shall be performed as specified in Section 01720 SURVEY REQUIREMENTS. Commencement of beachfill will not be permitted until the survey data from these surveys has been submitted, reviewed, and approved by the government.

3.4 CONSTRUCTION BASELINE - AREA NO. 1

The Contractor shall establish a construction baseline on the seaward side of the bulkhead or dune. The construction baseline shall be defined by station and offset from the design baseline indicated on the contract drawings. The Contractor shall stake the construction baseline for use by the Contractor's and Government personnel.

3.5 PLACEMENT OF BEACHFILL

3.5.1 General

Beachfill material shall be placed and shaped to the beachfill template lines, grades, slopes, and elevations shown on the drawings. There shall be no pronounced ridges or wash holes in the final grades and slopes unless otherwise indicated. A vertical tolerance of plus 0.0 feet and minus 0.2 feet will be permitted in the grades and slopes, above elevation -2.8 NAVD 88(mean low water). Below elevation -2.8 NAVD 88 (mean low water), the beachfill may be placed at a slope steeper, but not flatter, than the slopes shown on the drawings. The Contractor shall conduct his work operations so that no areas outside of the work limits shown on the drawings are disturbed. A spreader section shall be used at the discharge end of the pipeline for uniform distribution of the beachfill material.

Land-based equipment shall be used for grading the beachfill material.

All material shall be hydraulically placed. If the Contractor stockpiles material and subsequently uses land-based equipment to move the material to its final position, the Contractor shall wait 24 hours before after-surveys are conducted of that area.

During the operation of placing beachfill material, all debris resulting from construction operations shall be removed from the work site and disposed of at the Contractor's expense. Such disposal shall comply with all applicable Federal, state, and local laws. Such materials shall be removed from the site of the work before the date of completion of the work under these specifications.

3.5.2 Restrictions on Beachfill Operations

The Contractor will be allowed to close the beach, utilizing temporary fencing, barricades, and signage, in 2000 foot sections to allow placement of beachfill. Acceptance of beachfill will be made in 1000 foot sections. After acceptance of a section, the Contractor shall advance the closed section of beach. All other sections of the beach, except staging areas, are to remain open to the general public. Ramps must be provided over the pipeline to allow public access to the ocean. The Contractor shall ensure that any movement of pipeline or equipment is done, with recognition to the public presence, in accordance with the approved Accident Prevention Plan.

3.5.3 Placement of Beachfill Beneath Existing Beach Structures

Placement and grading of beachfill material by hand may be required beneath existing beach structures. The Contractor shall protect the existing beach structures from damage. Placement of beachfill material beneath structures shall be done in a manner that minimizes the ponding of water. If ponded areas are created due to the Contractor's operations the Contractor shall pump these areas dry at no expense to the Government. Beachfill will not be permitted to be placed on any infrastructure, decks, pavillions, etc., unless directed by the Contracting Officer. Any structures damaged shall be repaired at the expense of the Contractor.

3.5.4 Outfall Drainage

The Contractor shall maintain drainage of all outfalls at all times throughout the duration of the contract.

3.5.5 Hydraulic and Hopper Dredges

All pipelines used with hydraulic dredges shall be kept in good condition at all times, and any leaks or breaks shall be promptly repaired. Material excavated by hopper dredge shall be loaded into bins or hoppers. The material shall be pumped directly to the beachfill area by a means which will prevent the loss of any material into the ocean. Special care shall be taken to assure that hoppers do not leak during any phase of the contract work.

3.5.6 Accident Prevention Plan

Barricades, warning signs, and lights shall be provided by the Contractor, subject to the approval of the Contracting Officer as part of the accident prevention plan, for the protection and safety of the public using the adjacent beach areas. The beachfill dredge pipe shall be clearly marked

with buoy signs or other signage approved by the Contracting Officer at a distance of 200 feet seaward of the low water line at all locations that the dredge pipe is landed. This sign shall warn the public of the location and danger of the submerged pipe. All barricades, warning signs, and lights shall be installed prior to the start of any work.

3.5.7 Removal of Stakes and Markers

The Contractor shall remove all stakes, markers, temporary fencing, burlap, or other items used in the construction of the beach immediately after completion and before approval of an acceptance section, or as otherwise directed by the Contracting Officer. All stakes, markers, temporary fencing, burlap, or other items used in the construction that become uncovered after approval of the acceptance section shall be removed immediately.

3.6 CONTRACTOR QUALITY CONTROL

3.6.1 Contractor Reports

The Contractor shall prepare and maintain Daily Report of Operations forms, and shall furnish signed copies thereof with the daily Quality Control Records required in Section 01450 CONTRACTOR QUALITY CONTROL to the Contracting Officer. Copies of the Daily Construction Quality Report and Report of Operations forms to be used are attached to the end of that section. The Contractor shall indicate on the these daily forms the location and depth of dredging in the borrow area. The location shall be easily located on the map of the borrow area provided as a submittal.

3.6.2 Samples and Testing

The Contractor shall obtain samples of beachfill material from the finished beach at 500 foot intervals not more than two days following placement and final grading of beachfill and have them tested for grain size distribution in accordance with ASTM D 422. All testing shall be performed by a Corps of Engineers approved laboratory as specified in SECTION 01450: CONTRACTOR QUALITY CONTROL. Samples shall be obtained at approximately +3 feet NAVD, on the beachfill slope. The Contractor shall collect no more than five samples of beachfill material before sending the samples to the laboratory. The results of each test shall be recorded on ENG Form 2087, a copy of which is included in SECTION 00840 of this contract. The Contractor shall also record on ENG Form 2087 the location of the dredge within the borrow area and the depth of dredging at the time of placement of the sand sampled.

3.6.3 Form Preparation

Instructions regarding the preparation of all required forms will be provided at the Contractor Quality Control Coordination Meeting.

3.7 MEASUREMENT AND PAYMENT

3.7.1 Mobilization and Demobilization

All costs connected with the mobilization and demobilization of the Contractor's plant and equipment will be paid for at the lump sum price for this item as listed in the Bidding Schedule. Sixty percent (60%) of the lump sum price will be paid to the Contractor upon completion of his mobilization at the work site. The remaining forty percent (40%) will be included in the final payment for work under this contract.

3.7.1.1 Contractor Furnished Cost Data

In the event the Contracting Officer considers that the amount in this item (sixty percent) which represents mobilization, does not bear a reasonable relation to the cost of the work in this contract, the Contracting Officer may require the Contractor to furnish cost data to justify this portion of the bid price. Failure to justify such price to the satisfaction of the Contracting Officer will result in the payment of actual mobilization costs, as determined by the Contracting Officer, at the completion of mobilization. The payment of the remainder of this item will be included in the final payment under the contract. The determination of the Contracting Officer in these circumstances is not subject to appeal.

3.7.1.2 Mobilization and Demobilization Costs for Base Bid

All costs in connection with the mobilization and demobilization of the Contractor's plant and equipment as defined below shall be included in the contract lump sum price for Base Bid Item No. 1a "Mobilization and Demobilization".

a. Mobilization shall include all costs for operations accomplished prior to commencement of actual beachfill placement; that is transfer of all plant and equipment to the work site, initial installation of pipelines, and all other incidentals in advance of beachfill placement operations.

b. Demobilization shall include general preparation for transfer of the plant and equipment to the Contractor's home or standby base, removal of pipelines, cleanup, and the transfer of plant and equipment to the home or standby base.

3.7.2 Placement of Beachfill for Base Bid and Options 1, 2, 3, 4 and 5

Beachfill material placed in the designated area within the allowable tolerance will be measured for payment by the cubic yard in place on the beach. The total number of cubic yards placed will be computed by the average-end-area method from cross-section surveys taken by the Contractor before and after beachfill operations, as specified in Section 01720 SURVEY REQUIREMENTS and as required by Special Clause: QUANTITY SURVEYS. The volume so computed will be the pay quantity for the contract. A deduction of one cubic yard will be made from the pay quantity for every cubic yard of material removed below the following elevations for the associated borrow areas: -54 feet (NAVD 88) for Borrow Area 4 and -44 feet (NAVD) for Borrow Area 5. This deduction will be based on before-dredging surveys and after-dredging surveys. Payment for placing and grading the beachfill material will be made at the contract unit price per cubic yard for Base Bid Item No. 1b, "Beachfill" and Bid Item Nos. 2a, 3, 4, 5 and 6 (If Options 1, 2, 3, 4 and/or 5 are awarded). Payment for these Bid Items shall also include full compensation to the Contractor for conducting pre-placement condition surveys, maintaining drainage of the outfall pipes, beachfill testing, and performing all surveys of the borrow area and the surveys required for quantity computations.

-- End of Section --

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DAILY REPORT OF OPERATIONS

	CONTRACT NO.	DATE	RCS ENGKW-31 [Feeder]
DREDGE	CONTRACTOR		
LOCATION OF WORK (Range, Stationing, Longitudinal Position)		CHARACTER OF WORK [ ] Maintenance [ ] New	
DISPOSAL AREA OR REHANDLING BASIN	LENGTH OF DISCHARGE OF PIPELINE: Pontoon Ft. Shore Ft. Total Length Ft. Submerged Ft.		
CHARACTER OF MATERIAL AND PERCENTAGE OF EACH Gravel			
AVERAGE DEPTH (Feet and Tenths) Before Dredging After Dredging Payment Depth		WEATHER	
NUMBER OF MEN	MAN HOURS	MAN HOURS TO DATE	

WORK PERFORMED

ITEM	UNIT	AMOUNT GROSS	AMOUNT NET
Av. width of cut	Feet		
Area dredged	Sq. Ft.		
Distence advanced this period	Feet		
Distence advanced previously	Feet		
Distence advanced to date	Feet		
Amt. dredged this period	Cu. Yds.		
Amt. dredged previously	Cu. Yds.		
Total amt. dredged to date	Cu. Yds.		

ATTENDANT PLANT

ITEM	NAME	HOURS
Tugboat		
Tugboat		
Launch		
Barges		
Barges		
Scows		
Derrick		

COMMODITIES CONSUMED

ITEM	UNIT	QUANITY
Fuel oil	Gals.	
Lubricants	Gals.	
Lubricants	Pounds	
Water	Gals.	

DISTRIBUTION OF TIME

EFFECTIVE WORKING TIME	HOURS	MINUTES
Dredging		
Percentage of total time		
NON- EFFECTIVE TIME		
Handling pipe lines		
Handling swinging lines		
Clearing pump and pipe line		
Clearing cutter or suction head		
Changing location of plant on job		
Loss due to opposing natural elements <8hr		
Loss due to opposing natural elements >8hr		
Loss due to passing vessals		
Minor operating repairs <4hr		
Secure for weekend		
Miscelaneous (Explain in remarks)		
Total Non-effective Time		
LOST TIME NOT CHARGEABLE		
Loss due to repairs >4hr		
Loss due to laying /relaying submerged line		
Lay time off shift		
Sundays and Holidays		
Waiting for equipment plant		
Collisions		
TOTAL TIME IN PERIOD		

No. of Supervisory Inspections: By field personnel By office personnel

REMARKS (Attach additional aheet, if necesary)

BUCKET OR DIPPER DREDGE (only)

SCOW NO.	TIME START	TIME FINISH	TIME LOADING	CUBIC YARDS

TIDE DATA (all dredges)

STAGE	TIME	SLACK
H.W.	hrs.	
L.W.	hrs.	
H.W.	hrs.	
L.W.	hrs.	

LOCATION OF TIDE GAGE

AV. DEPTH BEFORE DREDGING	AV. DEPTH AFTER DREDGING
MIN. DEPTH AFTER DREDGING	MAX. DEPTH AFTER DREDGING
LENGTH OF CUT	WIDTH OF CUT

NO. OF MOVE OR SOUNDING	DISTANCE	TIME	TIDE	SOUNDINGS Upper – As Taken Lower – Reduced to M.L.W.	NO. OF MOVE OR SOUNDING	DISTANCE	TIME	TIDE	SOUNDINGS Upper – As Taken Lower – Reduced to M.L.W.

SUBMITTED BY	TITLE	DATE

NADP FORM 28 (back)
1 JAN 62

DAILY REPORT OF OPERATIONS - HOPPER DREDGES	REPORTS CONTROL SYMBOL NAPOP-1
DISTRICT	DREDGE
EXACT LOCATION OF WORK ☐ MAINTENANCE ☐ NEW WORK	DATE NUMBER OF PERSONS IN CREW

Av. Length of Cut	Ft.	CHARACTER OF MATERIAL		Hopper Capacity	Cu. Yds.
Av. Width of Cut	Ft.	Density of Mat. In Place	GMS/Liter	Av. Vol. of Residual	Cu. Yds.
Av. Dist. To Disposal	Miles	Density of Water	GMS/Liter At °F	Av. Unfilled Capacity	Cu. Yds.

Navigation And Other Dredging Aids (Describe and include statement on Adequacy and Recommendations)

WORK PERFORMED				DRAFT FOR LOAD NO. (for one load only)		
	DREDGING & HAULING		AGITATING		LIGHT	LOADED
No. Of Loads	Total Cu. Yds. Delivered	Disposal Area Mooring Location	Tot. Cu. Yds.	Forward		
				Aft		
				Drag Depth	Max.	Min.
				Indicators Last Checked on		
				Gas Ejectors Used		% of Pumping Time

DISTRIBUTION OF TIME AND MILES RUN

EFFECTIVE WORKING TIME	AGITATING (Minutes)	DREDGING AND HAULING (Minutes)	MILES RUN (Stat. Miles)
Pumping			
Turning			
To and From Disposal			
Disposal (Includes Docking, Pumping Out, Undocking)			
TOTALS			
NON-EFFECTIVE WORKING TIME			
Taking On Fuel And Supplies			
To And From Wharf Or Anchorage			
Loss Due To Natural Elements			
Loss Due To Traffic And Bridges			
Loss Due To Mooring Barge			
Minor Operating Repairs			
Transferring Between Works			
Lay Time			
Fire And Boat Drills			
Miscellaneous			
TOTALS			
LOST TIME			
Major Repairs And Alterations			
Cessation			
Collisions			
TOTAL LOST TIME			
TOTAL TIME IN PERIOD			

AVERAGE SPEED OF DREDGE		MINUTES RADAR IN USE	
	Feet/Minute	Tide Data Was Obtained By Means Of	
Loading		Length of Pipeline,	Feet
Agitating		Weather	
Gals. Of Fuel Oil Consumed		NUMBER OF INSPECTIONS BY SUPERVISORY PERSONNEL	
Gals. Of Water Consumed		Field	Office

REMARKS

SUBMITTED BY

NADP FORM
1 NOV 66 582 EDITION OF 1 DEC 54, IS OBSOLETE.

LOAD NO.	BREAKDOWN OF LOADS DREDGED AND HAULED														DATE
	TIME PUMP		MINUTES								CUBIC YARDS			Drag Depth While Loading	MATE AND DRAGTENDERS
	Started	Stopped	Pumping	Turning	To Disposal	Docking *	Pumping Out	Undocking **	To Cut	Total Time	Delivered	Free Dumped	Residual		
	Average														

ECONOMIC LOAD DATA				
Pumping Time (Minutes)	Economic Load (Cu. Yds.)	Test Load No.	Date of Test	

Remarks

NOTE:
* Includes time to connect ball joint.
** Includes time to disconnect ball joint.

SECTION 02400

STORMWATER OUTFALL PIPES

PART 1 GENERAL

1.1 SCOPE OF SECTION

The work covered by this section consists of furnishing all labor, materials, plant and equipment, and performing all operations required for extending existing stormwater outfall pipes with new ductile iron pipe as specified herein and shown on the drawings.

1.2 REFERENCES

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

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI C110	(1987) Ductile-Iron and Gray-Iron Fittings, 3-Inch Through 48-Inch for Water and Other Liquids
ANSI C111	(1985) Rubber-Gasket Joints for Ductile-Iron and Gray-Iron Pressure Pipe and Fittings
ANSI C151	(1986) Ductile-Iron Pipe, Centrifugally Cast in Metal Molds or Sand-Lined Molds, for Water and Other Liquids

ASTM INTERNATIONAL (ASTM)

ASTM C 564	(1997) Rubber Gaskets for Cast Iron Soil Pipe and Fittings
ASTM C 920	(2002) Elastomeric Joint Sealants

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(Latest Rev.) Safety and Health Requirements Manual

1.3 DELIVERY, STORAGE, AND HANDLING

Materials delivered to the site shall be inspected for damage, unloaded, and stored with a minimum of handling. Materials shall not be stored directly on the ground. The inside of pipes and fittings shall be kept free of dirt and debris. Rubber gaskets and flexible coupling shall be protected from exposure to direct sunlight over extended periods.

Materials shall be handled in such a manner as to insure delivery to the installation location in a sound, undamaged condition. Pipes shall be carried to the installation location, not dragged.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Outfall Extensions; G,DO.

The Contractor shall submit a separate shop drawing for each outfall extension location. Drawings shall show invert elevations, slopes of the pipes and number of supports. Pipe and pipe support systems shall be detailed.

SD-03 Product Data

Flexible Coupling; G,COR. Ductile Iron Pipe; G,COR.

Manufacturer's data and installation instructions shall be submitted to the Contracting Officer, for the flexible coupling, elastomeric sealant, ductile iron pipe, and fittings, prior to installation.

SD-07 Certificates

Detailed Work Plan; G,DO.

The Contractor shall submit to the Contracting Officer, for approval, prior to performing the work in this section, a detailed work plan for transporting, storing, inspecting, repairing, recording, and installing all materials specified in this section.

Flexible Coupling and Clamps; G,COR. Ductile Iron Pipe, and Fittings; G,COR. Rubber Gaskets; G,COR.

Statement signed by an official authorized to certify on behalf of the manufacturer of a product, system or material, attesting that the product, system or material meets specified requirements. The statement must be dated after the award of the contract, must state the Contractor's name and address, must name the project and location, and must list the specific requirements which are being certified.

Outfall Extension.

A complete and accurate record of each outfall extension shall be furnished by the Contractor within three days of completion of pipe installation. The record shall indicate the outfall number and station, the pile spacings, pipe sizes and lengths, member sizes, and materials used.

1.5 SITE CONDITIONS

Bidders are expected to examine the site of the work in accordance with

Contract Clause: SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK to determine the conditions affecting their operations. The entire work site is designated as a hard hat area in accordance with EM 385-1-1.

PART 2 PRODUCTS

2.1 PIPE AND OTHER FITTINGS

Pipe and other fittings shall be ductile iron and shall be a minimum of Class 250 with push-on type joints, conforming to ANSI C151 and ANSI C110 respectively. The last section of pipe shall have a flanged end on the seaward end of the pipe for connection of a new rubber check valve, and shall be a minimum of Class 250. Rubber gaskets and lubricant shall conform to ANSI C111 and the pipe manufacturer's recommendations. The diameter of the ductile iron pipe shall be as indicated on the contract drawings. The Contractor shall be aware that the pipes supplied by the manufacturer may vary in length. The Contractor shall select the length of pipe to ensure the pipe joints are located within a pipe support system. Cutting of pipes to ensure the pipe joints are located within a pipe support system will not be permitted.

2.2 FLEXIBLE PIPE COUPLING

Flexible pipe coupling shall be a sleeve-type, made of elastomeric polyvinyl chloride (PVC) and designed to fit the outside diameters of existing ductile iron pipe, and the new ductile iron pipe. Coupling shall meet the applicable requirements of ASTM C 564 and shall be furnished with stainless steel clamps as shown on the drawings for compression of the coupling to the pipes. Coupling material shall include an ultraviolet sunscreen and a fungicide preventative and shall be resistant to ozone.

2.2.1 Elastomeric Sealant

Elastomeric sealant shall be a 2-component, premium grade, polyurethane-base in accordance with ASTM C 920. Sealant primer and surface conditions shall be in accordance with the sealant manufacturer`s recommendation. Sealant is intended for sealing joints exceeding 1/2 inches in depth.

2.2.2 Rubber Check Valves

Rubber check valve shall be Series 35 check valve as manufactured by Red Valve Company, Inc., 700 North Bell Ave, Carnegie, PA 15106, 412-279-0044, or approved equal. The valve shall be all rubber with a flanged end connection with stainless steel backup rings. The flange drilling shall be compatable with the pipe. The valve shall allow passage of flow in one direction only, and shall seal completely around solids.

PART 3 EXECUTION

3.1 GENERAL

3.1.1 Excavation and Trenching

Excavation and trenching for installation of pipes shall be in accordance with Section 02220 EXCAVATION, TRENCHING, AND BACKFILLING.

3.2 INSTALLATION

3.2.1 General

The installation of outfall pipe and associated pipe supports shall proceed concurrently with the placement of beachfill. The Contractor shall establish and maintain the drainage of the outfall pipes at all times throughout the entire contract. Any excavation associated with the installation of the new pipes shall be laid back to a stable slope or sheeted and shored as specified in Section 02220 EXCAVATION, TRENCHING, AND BACKFILLING. Timber piles and timber cribbing for the stormwater outfall support systems shall be installed as specified in Section 06140 PIPE SUPPORT SYSTEMS. Pipes and other fittings shall be installed on the timber cribbing to the lines, slopes, and inverts shown on the contract drawings. The Contractor shall ensure that all pipe joints will be located within pipe support systems as shown on the contract drawings. Field cutting of pipes shall be in accordance with the pipe manufacturer`s instructions.

3.2.2 Placing and Laying

Pipe and accessories shall be carefully placed onto the pipe support systems by means of derrick, ropes, belt slings, or other authorized equipment. Pipe shall be laid with the bells facing landward. Maximum unsupported pipe span length shall be 18 feet. Pipe that has the grade or joint disturbed after laying shall be taken up and relaid. When work is not in progress, open ends of pipe shall be securely closed. Where any part of the coating or lining is damaged, the repair shall be made by and at the Contractor's expense according to manufacturers recommendations in a satisfactory manner.

3.2.3 Jointing

The new ductile iron outfall pipe shall be connected to the existing ductile iron pipe using a flexible pipe coupling as shown on the contract drawings. Prior to installing the flexible coupling, the new and existing pipes shall be cleaned to produce a surface that is free of dirt, dust, loose rust or loose mill scale. Installation of the flexible coupling and torquing of clamps shall be in accordance with the coupling manufacturer`s instructions. Elastomeric sealant shall be used to seal the coupling as shown on the contract drawings.

3.2.4 Rubber Check Valves

Existing rubber check valve shall be removed from the end of the existing outfall pipe as indicated on the drawings, and a new check valve shall be installed on the seaward end of the new outfall extension pipe in accordance with the manufacturers instructions. The new check valve shall be bolted to the flanged end of the pipe using stainless steel nuts and bolts.

3.3 BACKFILL

Immediately after the pipes and inlets have been installed, recorded, and accepted, the trench shall be backfilled as specified in Section 02220 EXCAVATION, TRENCHING, AND BACKFILLING.

3.4 MEASUREMENT AND PAYMENT

The work specified in this section for extending the existing stormwater

outfall pipe will be measured for payment by the linear foot of new pipe installed measured along the centerline of the pipe. Payment for this work will be made at the contract unit price for "Extension of Stormwater Outfalls," Option 1 Bid Item No. 2c. (if Option 1 is awarded) The contract unit price shall constitute full compensation to the Contractor for required work incidental to the outfall; excavating and trenching for the new pipes; preparing the ends of existing pipes and installing new pipes, and fittings, gaskets, lubrication, couplings, installing check valve, backfilling and compacting around the pipes; and restoring the trenches.

-- End of Section --

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SECTION 02446

SAND FENCE AND DUNE GRASS

PART 1 GENERAL

1.1 SCOPE OF SECTION

The work covered by this section consists of furnishing all labor, materials, and equipment, and performing all operations required for the erection of sand fence and the planting and seeding of dune grass, as specified herein and shown on the drawings.

1.2 REFERENCES

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

AMERICAN WOOD-PRESERVERS' ASSOCIATION (AWPA)

AWPA C2	(2000) Lumber, Timber, Bridge Ties and Mine Ties - Preservative Treatment by Pressure Processes
AWPA P5	(2001) Standards for Waterborne Preservatives

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-07 Certificates

Sand Fence. Dune Grass Plants and Seed.

Statement signed by an official authorized to certify on behalf of the manufacturer of a product, system or material, attesting that the product, system or material meets specified requirements. The statement must be dated after the award of the contract, must state the Contractor's name and address, must name the project and location, and must list the specific requirements which are being certified.

PART 2 PRODUCTS

2.1 SAND FENCE

2.1.1 Fence

Fence shall be a wood picket fence. Pickets shall be No. 1 white cedar. Pickets shall be relatively free of large knots and other structural defects. Binding wire shall be 19 gauge soft galvanized wire. Fence shall be stretched after weaving to ensure the pickets are tightly bound by the wire. Fence shall be furnished in 50-foot minimum lengths and shall be unpainted.

2.1.2 Fence Posts

Fencing shall be supported by 3" to 5" diameter cedar sawn round wood posts, 8-feet in length. Wood posts shall be treated in accordance with AWPA C2 with waterborne preservatives listed in AWPA P5 to a retention level of 0.40 pounds per cubic foot.

2.2 DUNE GRASS

2.2.1 Plants

Plants shall be the Cape variety of American Beachgrass (Ammophila breviligulata). Each plant shall consist of two or more healthy culms. Plants which are damaged will not be accepted.

2.2.2 Seed

Seed shall be the Atlantic variety of coastal panicgrass (Panicum amarum).

2.2.3 Fertilizer

Fertilizer shall be 10-10-10 grade. Fertilizer shall be uniform in composition, free-flowing, and suitable for application with approved equipment.

PART 3 EXECUTION

3.1 SAND FENCE

The sand fence shall be erected in such a manner as to accumulate wind blown sand and thereby aid in the formation of a dune. Fence shall be erected in the locations and along the lines shown on the drawings. Posts shall be provided at a maximum spacing of 10 feet and shall be driven 4 feet into the ground. Fence shall be secured to posts with bottom portion of fence touching the ground surface. Fence shall be lashed to posts at the same locations as the picket bindings with an overhand knot of 14 gauge soft galvanized wire or equivalent strength staples.

3.2 DUNE GRASS

3.2.1 General

The dunes shall be fertilized, planted, and seeded with beachgrass and panicgrass after construction of the dune has been completed.

3.2.2 Surface Preparation

All surfaces to be planted shall be graded with no sharp depressions greater than 2 inches in depth. All compacted areas shall be scarified to a depth of 3 inches prior to planting.

3.2.3 Planting Method

3.2.3.1 Beachgrass

One beachgrass plant shall be planted per hole. The plants shall be spaced 18 inches apart within a row and rows shall be spaced 18 inches apart. The ends of rows shall be staggered 9 inches. The dune grass shall be planted in 8-9" deep holes. Fertilizer shall be applied at 400 pounds per acre, 30 days after planting, but no earlier than April 1.

3.2.3.2 Panicgrass

The dunes shall subsequently be over seeded into the stands of American beachgrass with panicgrass from the centerline of the dune to the landside dune toe. The panicgrass shall be seeded at a rate of 8 - 12 pounds of seed per acre. Seeds shall be planted 1.5 to 2 inches deep either by hand or by a mechanically operated drill or seeder.

3.2.4 Planting Season

Beachgrass shall only be planted between 15 October and 1 April, under nonfrozen soil conditions. Panicgrass seeds shall only be planted between 1 November and 15 April.

3.2.5 Care and Protection

The Contractor shall be responsible for proper care and protection of all planted areas. At least 80% plant survival is required in areas at the end of the first growing season. Areas having less than an 80% survival rate shall be replanted and fertilized by the Contractor.

3.3 MEASUREMENT AND PAYMENT

3.3.1 Dune Grass

The work specified in this section for planting and seeding of dune grass will not be measured for payment. Payment for this work will be made at the contract lump sum price for "Dune Grass", Base Bid Item No. 1g and Option 1 Bid Item No. 2f (if Option 1 is awarded).

3.3.2 Sand Fence

The work specified in this section for sand fence, installed parallel to the dune centerline, will be measured for payment by the linear footage of sand fence installed. Payment for this work will be made at the contract unit price for "Sand Fence," Base Bid Item No. 1h and Option 1 Item No. 2g (if Option 1 is awarded). (All sand fence incidental to construction of dune crossovers shall be included in the unit prices for those dune crossovers.)

-- End of Section --

SECTION 02500

DUNE CROSSOVERS AND ACCESS ROAD

PART 1 GENERAL

1.1 SCOPE OF SECTION

The work covered by this section consists of furnishing all labor, materials, and equipment, and performing all operations required for the construction of pedestrian, vehicle, handicapped, and piping plover dune crossovers, and the construction of an access road as specified herein and shown on the drawings.

1.2 REFERENCES

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

ASTM INTERNATIONAL (ASTM)

ASTM D 422	(1963, Rev. 1998) Particle-Size Analysis of Soils
ASTM D 1556	(2000) Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D 1557	(2000) Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/cu. ft. (2,700 kN-m/cu.m.))
ASTM D 2922	(1996e1) Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
ASTM D 3017	(1996) Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth)
ASTM F 593	(1998) Stainless Steel Bolts, Hex Cap Screws, and Studs
ASTM F 594	(1991) Stainless Steel Nuts

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME B18.22.1	(1965; R 1990) Plain Washers

AMERICAN WOOD PRESERVERS ASSOCIATION (AWPA)

AWPA C2	(2000) Lumber, Timbers, Bridge Ties, and Mine Ties Preservative Treatment by Pressure Process

AWPA M4	(1999) The Care of Preservative-Treated Wood Products
AWPA P5	(2001) Standards for Waterborne Preservatives

SOUTHERN PINE INSPECTION BUREAU (SPIB)

SPIB-01	(1994; Supplements 8 thru 11) Grading Rules for Southern Pine Lumber

NEW JERSEY DEPARTMENT OF TRANSPORTATION (NJDOT)

NJDOT Specifications	(1989 Edition) Standard Specifications for Road and Bridge Construction

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Handicap, Vehicle, and Pedestrian Crossovers, and Access Road; G,DO.

The Contractor shall submit drawings which graphically show the details of the handicap, vehicle and pedestrian crossovers including materials, connections, and details of fabrication and installation. A typical drawing shall be submitted for all locations requiring a standard pedestrian crossover. A typical drawing shall be submitted for all locations requiring a modified pedestrian crossover. A separate shop drawing shall be submitted for each location requiring a handicap crossover. A separate shop drawing shall be submitted for each location requiring a vehicle crossover. A separate shop drawing, showing a typical cross section, shall be submitted for the new access road and the improvements to the existing access road. All shop drawings for modular crossovers (standard and modified pedestrian) shall include the number and length of the units required.

SD-03 Product Data

Materials for Handicap, Vehicle, and Pedestrian Crossovers; G,DO

The Contractor shall submit information describing the quality and performance of the materials proposed for all crossovers.

SD-06 Test Reports

Grain Size Distribution Curves; G,DO.

Grain size distribution curves shall be in accordance with ASTM D 422 and

be submitted from the source(quarry) of the I-5 to be used on the vehicle dune crossovers.

SD-07 Certificates

Work Plans for Handicap, Vehicle, and Pedestrian Crossovers; G,DO.

The Contractor shall submit work plans for the construction and installation of the handicap, vehicle, and all types of pedestrian crossovers. The work plans shall include the labor, equipment, and methods to be used to fabricate and/or install the crossovers. Individual work plans shall be prepared for each location for each type of crossover.

PART 2 PRODUCTS

2.1 SELECT FILL

Soil aggregate, designation I-5, conforming to Subsection 901.09 of the NJDOT Specifications. The soil aggregate shall have a gradation designation of I-5 as specified in Subsection 901.21, Table 901-2 of the NJDOT Specifications. Recycled materials are not acceptable.

2.2 CRUSHED CLAMSHELLS

Crushed clamshells shall be as supplied by W. Franlin Garrison, P.O. Box 94, Dividing Creek, NJ 08315, 856-785-0919, 856-447-3722 (fax), or approved equal.

2.3 LUMBER AND TIMBERS

2.3.1 Decking, Posts and Structural Lumber

Lumber and timbers shall be the Southern Yellow Pine, grade "dense standard decking" per SPIB-01. Lumber and timbers shall be treated in accordance with AWPA C2 with waterborne preservatives listed in AWPA P5 to a retention level of 0.40 pcf intended for ground contact

2.3.2 Handrails, Side Rails and Top Rails

Lumber used for the handicap crossover handrails, side rails and top rails shall constructed with wood-polymer composite lumber. Color shall be natural.

2.4 THRU BOLTS, SCREWS, NUTS, AND WASHERS

ASTM F 593 or ASTM F 594, Group 2 (316 alloy) stainless steel for screws, bolts, and nuts. ASME B18.22.1 for washers, except fabricate washers of 316 alloy stainless steel.

2.5 GEOTEXTILE

Geotextile shall be as specified in Section 02373 GEOTEXTILE

2.6 SAND FENCE

Sand fence shall be as specified in Section 02446 SAND FENCE AND DUNE GRASS

PART 3 EXECUTION

3.1 VEHICLE AND PEDESTRIAN DUNE CROSSOVERS AND ACCESS ROAD

3.1.1 General

The vehicle and pedestrian dune crossovers and the access road shall be constructed in the locations and in the manner indicated on the contract drawings using geotextile, select fill and crushed clamshells. The geotextile shall be placed as specified in Section 02373 GEOTEXTILE. The existing access road shall be bladed or excavated as necessary and a new access road constructed on top using the same materials specified above for the new access road. Finish grade of existing road shall match grade of new access road.

3.1.2 Placing, Spreading, Moisture Control and Compaction

Select material shall be placed in maximum 12 inch lifts and compacted to at least 90 percent laboratory maximum dry density as determined by the Modified Proctor test procedure as specified in ASTM D 1557. If the select material is too wet to facilitate proper compaction, it shall be removed and replaced or dried out by any method approved by the Contracting Officer. Placement of the material shall be made to the lines and grades shown on the contract drawings and compacted by the controlled use of the hauling and spreading equipment. Movement of the equipment shall be distributed as much as practicable over the surface to provide uniform compaction and complete coverage of the fill. Crushed clamshells shall be dumped and spread to the lines and grades as shown on the contract drawings. Crushed clamshells shall not be compacted.

3.1.3 Testing

The Contractor shall be wholly responsible for furnishing material meeting the requirements specified herein, for placing the material within the limits of moisture suitable for proper compaction, and for compacting the materials in accordance with the requirements of this section. The Contractor is also responsible for performing laboratory tests as required to control the work and demonstrate compliance with material specifications. Testing shall be as specified in Section 01450 CONTRACTOR QUALITY CONTROL. Field in-place density shall be determined in accordance with ASTM D 2922. ASTM D 2922 results in a wet unit weight of soil and ASTM D 3017 shall be used to determine the moisture content of the soil. The calibration curves furnished with the moisture gauges shall also be checked along with density calibration checks as described in ASTM D 3017; the calibration checks of both the density and moisture gauges shall be made at the beginning of a job on each different type of material encountered and at intervals as directed by the Contracting Officer. When test results indicate, as determined by the Contracting Officer, that compaction is not as specified, the material shall be removed, replaced and recompacted to meet specification requirements. Tests on recompacted areas shall be performed to determine conformance with specification requirements. The following number of tests, if performed at the appropriate time, will be the minimum acceptable for each type operation.

a. During the course of construction, if the source, appearance or performance of the crossover materials noticeably changes in the opinion of the Contracting Officer, the appropriate index testing, described herein, of the materials shall be repeated to ensure specification compliance and reestablish moisture/density relationships

for compaction.

b. Three compaction tests shall be performed in accordance with ASTM D 1557 for each type material used as crossover material to determine the optimum moisture and laboratory maximum density values.

c. A minimum of two in-place nuclear density tests shall be performed per lift of material placed at each crossing.

d. In-place densities shall be checked using ASTM D 1556 a minimum of one time during placement of the crossover materials for every 5 crossovers constructed. Additional checks shall be performed as requested by the Contracting Officer.

3.1.3.1 Action Required for Non-Compliance

Whenever testing specified in this Section indicates material non-compliance, the Contractor shall be required to remove all material not meeting the specification requirements. The Contracting Officer shall require as many additional tests as necessary to identify the limits of unsuitable material. No additional payment will be made for test required to determine the limits of unsuitable material nor for the cost of removal and replacement with suitable material.

3.1.4 Associated Sand Fence

The sand fence shall be constructed as indicated on the contract drawings and in the manner specified in Section 02446 SAND FENCE AND DUNE GRASS.

3.2 HANDICAP DUNE CROSSOVERS

The handicap dune crossovers shall be constructed as indicated on the contract drawings. Immediately after cutting, notching and drilling all lumber and timbers, the lumber and timbers shall be treated as specified in AWPA M4.

3.3 PIPING PLOVER CROSSOVERS

Piping plover crossovers shall be constructed to the line and grades as shown on the contract drawings using beachfill material. Beachfill shall be as specified in Section 02390 BEACHFILL.

3.4 MEASUREMENT AND PAYMENT

3.4.1 Pedestrian Dune Crossovers

The work specified in this section for the construction of pedestrian dune crossovers will be measured for payment by the linear foot of crossovers satisfactorily provided and accepted. Payment will be made at the contract price per unit for "Pedestrian Dune Crossovers," Base Bid Item No. 1d and Option 1 Bid Item No. 2d (if Option 1 is awarded). Payment shall include sand fence incidental to the construction of these dune crossovers.

3.4.2 Vehicle Dune Crossovers

The work specified in this section for the construction of vehicle dune crossover will not be measured for payment. Payment will be made at the contract lump sum price for "Vehicle Dune Crossovers," Base Bid Item No. 1e

and Option 1 Bid Item No. 2e (if Option 1 is awarded).

3.4.3 Handicap Dune Crossovers

The work specified in this section for the construction of handicap dune crossovers will be measured for payment by the linear foot of handicap dune crossovers satisfactorily constructed and accepted. Payment will be made at the contract price per unit for "Handicap Dune Crossovers," Base Bid Item No. 1f.

3.4.4 Piping Plover Crossovers

The work specified in this section for the construction of the piping plover crossovers will be measured and paid for by the cubic yard of beachfill in place on the beach as specified in Section 02390 BEACHFILL.

3.4.5 Access Road Construction

No separate measurement or payment will be made for the work specified in this section for the construction of the access road. All costs in connection with this work shall be included in the contract unit price for "Beachfill - Area No. 3", Option 1 Bid Item No. 2a. (if Option 1 is awarded).

-- End of Section --

SECTION 06140

PIPE SUPPORT SYSTEMS

PART 1 GENERAL

1.1 SCOPE OF SECTION

The work covered by this section consists of furnishing all labor, materials, plant and equipment, and performing all operations required for installing the stormwater outfall pipe support systems as specified herein and shown on the drawings.

1.2 APPLICABLE PUBLICATIONS

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

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI B18.22.1	(1981) Plain Washers

ASTM INTERNATIONAL (ASTM)

ASTM A 153	(2001a) Zinc Coating (Hot-Dip) on Iron and Steel Hardware
ASTM A 307	(2000) Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength
ASTM A 563	(2001) Carbon and Alloy Steel Nuts
ASTM D 25	(1999) Round Timber Piles
ASTM F 593	(1998) Stainless Steel Bolts, Hex Cap Screws, and Studs
ASTM F 594	(1991) Stainless Steel Nuts

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME B18.22.1	(1965; R 1990) Plain Washers

AMERICAN WOOD PRESERVERS ASSOCIATION (AWPA)

AWPA C1	(2000) All Timber Products - Preservative Treatment by Pressure Processes
AWPA C2	(2000) Lumber, Timbers, Bridge Ties, and Mine Ties Preservative Treatment by Pressure Process

AWPA C3	(1999) Piles - Preservative Treatment by Pressure Processes
AWPA M2	(2000) Inspection of Treated Timber Products
AWPA M4	(1999) The Care of Preservative-Treated Wood Products

U.S. GENERAL SERVICES ADMINISTRATION (GSA)

FS MM-L-751	(Rev. H) Lumber, Softwood

SOUTHERN PINE INSPECTION BUREAU (SPIB)

SPIB-01	(1994; Supplements 8 thru 11) Grading Rules for Southern Pine Lumber

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(Latest Rev.) Safety and Health Requirements Manual

1.3 QUALITY ASSURANCE

1.3.1 Inspection

The Contractor shall provide the necessary facilities at the work site for the proper inspection of each timber pile and timber cribbing upon delivery. Any material inspected and found not to meet this specification shall be removed from the site and disposed of at the expense of the Contractor. If during any phase of the contract work the Contracting Officer has reason to believe the preservative treatment of the timber piles or timber cribbings is of insufficient quality the Contractor may be required to test the piles or timber cribbing in accordance with AWPA M2. Any material damaged after inspection may be subsequently rejected if damage is deemed sufficient for rejection by the Contracting Officer. All rejected materials shall be removed from the site and disposed of at the expense of the Contractor.

1.3.2 Delivery, Storage, and Handling

Materials delivered to the site shall be inspected for damage, unloaded, and stored with a minimum of handling. Materials shall not be stored directly on the ground. Materials shall be handled in such a manner as to insure delivery to the installation location in a sound, undamaged condition.

Special care shall be taken in supporting timber piles to prevent the inducing of excessive bending stresses in the piles. Handling of timber piles shall be in accordance with AWPA M4. Timber piles shall be carefully handled without dropping, breaking of outer fibers, or penetrating the

surface with tools.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-07 Certificates

Equipment Description; G,DO.

Detailed descriptions of all pile driving and jetting equipment to be used in the work shall be submitted for approval prior to commencement of pile installation. This shall include sketches, details, and descriptions of the driving hammer, power plant, leads, driving cap and cushion material, collars, jetting nozzle, water supply system, and other appurtenances.

Detailed Work Plan; G,DO.

The Contractor shall submit to the Contracting Officer, for approval, prior to performing the work in this section, a detailed work plan for transporting, storing, inspecting, repairing, recording, and installing all materials. This plan shall emphasize the means in which the Contractor shall ensure that the timber piles are installed so all the pipe joints are located within a support system as indicated on the contract drawings. This plan shall include detailed drawings or sketches of any templates or guides which shall be used to properly locate the piles prior to installation.

Timber Piles. Timber Cribbing. Thru Bolts, Nuts, and Washers; G,DO.

Statement signed by an official authorized to certify on behalf of the manufacturer of a product, system or material, attesting that the product, system or material meets specified requirements. The statement must be dated after the award of the contract, must state the Contractor's name and address, must name the project and location, and must list the specific requirements which are being certified.

Preservative Treatment Certificate; G,DO.

Certificates of compliance from an approved testing organization attesting that the timber piles and timber cribbing to be used in the work have been given the preservative treatment required by these specifications, shall be submitted to the Contracting Officer prior to delivery of any materials to the work site.

SD-18 Records

Pile Driving Records; G,DO.

A complete and accurate record of each pile shall be furnished by the Contractor within three days of completion of driving. The record shall

indicate the outfall number and station, the pile location (as driven), butt and tip diameters, total length, embedded length, final elevations of butt and tip, blows required for each foot of penetration throughout the entire length of the pile and for the final 6 inches of penetration, and the total driving time. The record shall also include the type and size of the hammer used, the rate of operation, and the type and dimensions of pile cap and cushion used. Any unusual conditions encountered during pile installation shall be recorded and immediately reported to the Contracting Officer.

1.5 SITE CONDITIONS

Bidders are expected to examine the site of the work in accordance with Contract Clause: SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK to determine the conditions affecting their operations. The entire work site is designated as a hard hat area in accordance with EM 385-1-1.

PART 2 PRODUCTS

2.1 TIMBER PILES

Timber piles shall be Douglas Fir or Southern Yellow Pine, clean-peeled, conforming to ASTM D 25. The nominal butt diameter, measured 3 feet from the butt, shall be 12 inches. The nominal tip diameter shall be greater than 9 inches. Tolerances of all piles shall be as specified in ASTM D 25. Southern Yellow Pine timber piles shall be pressure-preservative treated with CCA (Chromated Copper Arsenate) water borne preservative with a uniform minimum net retention of solid preservative of 2.5 pounds per cubic foot. Douglas Fir timber piles shall be pressure-preservative treated with ACZA (Ammoniacal Copper Zinc Arsenate) water borne preservative with a uniform minimum net retention of solid preservative of 2.5 pounds per cubic foot. All piles shall be marked at 1 foot intervals starting from the tip to the butt with a lumber crayon. The butt and tip of the piles shall be cut square with the long axis of the piles. Chamfering or shaving of the pile tips will not be permitted. Exposed areas of treated piles that are cut or drilled after treatment shall receive a field treatment in accordance with AWPA M4.

2.2 TIMBER CRIBBING

Timber cribbing shall be Southern Yellow Pine, Stress Grade No. 1, and shall conform to SPIB-01 and the applicable requirements of FS MM-L-751. Cribbing shall be surfaced four sides and shall be pressure-preservative treated with CCA (Chromated Copper Arsenate) water borne preservative with a uniform minimum net retention of solid preservative of 2.5 pounds per cubic foot. Exposed areas of treated timber that are cut or drilled after treatment shall receive a field treatment in accordance with AWPA M4.

2.3 THRU BOLTS, NUTS, AND WASHERS

ASTM F 593 or ASTM F 594, Group 2 (316 alloy) stainless steel for nuts and bolts. ASME B18.22.1 for washers, except fabricate washers of 316 alloy stainless steel.

PART 3 EXECUTION

3.1 INSTALLATION

3.1.1 General

After inspection of each pile upon delivery, each pile shall be inspected in the leads prior to installation. Damaged piles shall be repaired in accordance with AWPA M4, unless the pile is damaged to such extent that it is rejected. Piles shall be laterally supported during driving, but shall not be unduly restrained from rotation in the leads. Pile collars or bands shall be placed around the pile butt to prevent brooming. Piles shall be installed such that no more than 2 feet of each pile needs to be cut off. Cutting of piles, if required, shall be with pneumatic tools, sawing, or other means approved by the Contracting Officer. Bolt holes as indicated on the drawings shall be of the size that will insure a driving fit.

Timber cribbing shall be notched to fit the circumference of the pipe, cut to length, and attached to the wood piles using thru bolts, washers, and nuts as shown on the drawings. Nailing of timber cribbing to the piles prior to drilling holes for thru bolts will only be permitted through the vertical face of the cribbing.

3.1.2 Equipment

3.1.2.1 General

Pile driving hammers shall be steam, air or diesel drop, single-acting, double-acting, or differential-acting type. The size and capacity of hammers shall be as recommended by the manufacturer for the pile weights and soil formation to be penetrated. The maximum driving energy of hammers shall be 12,000 foot-pounds for piles of any length. Driving caps shall be of an approved design and shall be capable of protecting pile heads, minimizing energy absorption, and transmitting hammer energy uniformly and consistently to the piles. Driving caps shall fit snugly on the top of the piles and shall employ a cushion block to prevent impact damage to the piles. The cushion block may be a solid or laminated softwood block with the grain parallel to the pile axis and enclosed in a close-fitting steel housing. The thickness of the block shall be suitable for the length of pile to be driven and character of subsurface material to be encountered. Generally, thicker blocks are required for longer piles and softer subsurface material.

3.1.2.2 Pile Collars and Bands

Pile collars or bands for protecting pile butts against splitting, brooming, and other damage while being driven shall be of an approved design.

3.1.2.3 Jetting Equipment

Jetting equipment shall have not less than two removable or fixed, water or

combination air-water type jets. Equipment shall be designed so that the discharge volume and pressure are sufficient to freely erode the material under and adjacent to the piles.

3.1.3 Placement

Piles shall be accurately placed in the correct locations and alignments both laterally and vertically to ensure that the pipe joints will be located within a support system as shown on the contract drawings. The correct location of piles shall be maintained by the use of templates, guides, or by other approved means. A vertical deviation during placement of not more than 1/4 inch per foot of pile will be permitted. The Contractor shall provide a method to monitor the pile verticality during placement. A lateral deviation from the correct location at the final top elevation of not more than 2 inches will be permitted. A combination of the vertical and lateral deviations at the final top elevation shall not exceed the allowable lateral deviation. Manipulation of piles to force them into position will not be permitted. Piles incorrectly placed shall be pulled and replaced at the Contractor's expense.

3.1.4 Driving

3.1.4.1 General

Piles shall be driven without interruption to the depth indicated on the contract drawings. During driving, pile driving hammers shall be operated at the rate and conditions recommended by the hammer manufacturer.

3.1.4.2 Hammer Pressure

Sufficient pressure shall be maintained at the hammer so that: (1) for double-acting hammer, the number of blows per minute during and at the completion of driving of a pile is approximately equal to that at which the hammer is rated; (2) for single-acting hammer, there is a full upward stroke of the ram; and (3) for differential-type hammer, there is a slight rise of the hammer base during each upward stroke. The driving cap or cushion block shall be replaced whenever they become damaged, split, highly compressed, charred or burned, or have become spongy or deteriorated in any manner. Under no circumstances will the use of small wood blocks, wood chips, rope, or other material permitting excessive loss of hammer energy be permitted.

3.1.5 Jetting

Jetting may be used for placement of the piles. During the jetting operation the Contractor shall take all necessary precautions to ensure that the jetting nozzle does not advance ahead of the pile being jetted. Each pile shall be seated by stopping the pile and the jetting 3 feet from the final tip elevation and immediately driving the pile 3 feet or to the maximum of 5-10 blows per inch, whichever occurs first. Driving of the piles shall be as specified in Paragraph "Driving". The driving hammer shall be as specified in Paragraph "Equipment".

3.1.6 Surface Treatment

Immediately after cutting, notching and drilling all affected surfaces of the timber piles and timber cribbing shall be treated as specified in AWPA M4.

3.2 MEASUREMENT AND PAYMENT

The work specified in this section for providing new pipe support systems for the size pipes shown on the drawings will be measured for payment per linear foot of stormwater outfall extension. Payment for this work will be made at the contract unit price for "Extension of Stormwater Outfalls," , Option 1 Item No. 2c (if Option 1 is awarded).

-- End of Section --

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