



Request for Proposal 13-X-22672

For: NJDEP – NJGS & WS Vibracore Processing

Event	Date	Time
Bidder's Electronic Question Due Date (Refer to RFP Section 1.3.1 for more information.)	10/15/12	5:00 PM
Proposal Submission Date (Refer to RFP Section 1.3.2 for more information.)	11/8/2012	2:00 PM

Dates are subject to change. All changes will be reflected in Addenda to the RFP posted on the Division of Purchase and Property website.

	Status	Category
Small Business Set-Aside	☒ Not Applicable	☐ I
	☐ Entire Contract	☐ II
	☐ Partial Contract	☐ III
	☐ Subcontracting Only	

RFP Issued By

State of New Jersey
Department of the Treasury
Division of Purchase and Property
Trenton, New Jersey 08625-0230

Using Agency

NJ Department of Environmental Protection -
NJG&WS

Date: September 18, 2012

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1.0 INFORMATION FOR BIDDERS

1.1 PURPOSE AND INTENT

This Request for Proposal (RFP) is issued by the Procurement Bureau, Division of Purchase and Property, Department of the Treasury on behalf of the New Jersey Department of Environmental Protection. The purpose of this RFP is to solicit proposals to provide services for lithologic analysis of vibracores collected as part of geophysical data used to map the State's offshore geology and sand deposits.

The intent of this RFP is to award a contract to that responsible bidder whose proposal, conforming to this RFP is most advantageous to the State, price and other factors considered. The State, however, reserves the right to separately procure individual requirements that are the subject of the contract during the contract term, when deemed by the Director to be in the State's best interest.

The State of NJ Standard Terms and Conditions will apply to all contracts or purchase agreements made with the State of New Jersey. These terms are in addition to the terms and conditions set forth in this RFP and should be read in conjunction with them unless the RFP specifically indicates otherwise.

1.2 BACKGROUND

The NJDEP, New Jersey Geological and Water Survey (NJG&WS), maps the State's offshore geology and sand deposits by acquiring, analyzing and interpreting marine geologic and geophysical data. As part of that analysis, NJG&WS collects offshore sediment samples in six (6) - meter [twenty (20) - foot] vibracores. NJG&WS performs lithologic analysis of the cores, including grain size analyses on sediment samples collected from the cores at thirty (30) - centimeter intervals. This process yields approximately twenty (20) samples per vibracore. The grain size analysis enables NJG&WS to define lithologic changes down-core, characterize and correlate the lithology to sub-bottom acoustic data, and calculate sand volumes for specific resource areas. NJG&WS is seeking to procure the processing of twenty-nine (29) vibracores; this includes, 1) opening, 2) photographing, 3) lithologic logging, 4) sampling, 5) wrapping the core sections for storage, and 6) pick-up and return delivery of the core sections and other deliverables to the NJG&WS facility at the completion of the work.

1.2.1 NOTABLE CHANGES SINCE LAST BID/CONTRACT AWARD

Participating bidders note: the scope of work has been revised since the last time that vibracore processing was solicited for bid. Therefore, be sure to read the entire RFP and all associated documents.

Notable changes include, but are not limited to:

Prior contracts included the actual offshore collection of cores;
NJDEP has already conducted the vibracoring and collected the cores;
This RFP is for lithologic logging;
Grain size analyses will be conducted under a separate contract; and
The State does not have contract spend data regarding lithologic logging only.

1.3 KEY EVENTS

1.3.1 ELECTRONIC QUESTION AND ANSWER PERIOD

The Division will electronically accept questions and inquiries from all potential bidders via the web at <http://ebid.nj.gov/QA.aspx>.

Questions should be directly tied to the RFP and asked in consecutive order, from beginning to end, following the organization of the RFP. Each question should begin by referencing the RFP page number and section number to which it relates.

Bidders must not contact the Using Agency directly, in person, by telephone or by e-mail, concerning this RFP.

The cut-off date for electronic questions and inquiries relating to this RFP is indicated on the cover sheet. Addenda to this RFP, if any, will be posted on the Division's website after the cut-off date. (See RFP Section 1.4.1 for further information.)

1.3.2 SUBMISSION OF PROPOSAL

In order to be considered for award, the proposal must be received by the Procurement Bureau of the Division of Purchase and Property at the appropriate location by the required time. **ANY PROPOSAL NOT RECEIVED ON TIME AT THE LOCATION INDICATED BELOW WILL BE REJECTED. THE DATE AND TIME ARE INDICATED ON THE COVER SHEET. THE LOCATION IS AS FOLLOWS:**

PROPOSAL RECEIVING ROOM – 9TH FLOOR
PROCUREMENT BUREAU
DIVISION OF PURCHASE AND PROPERTY
DEPARTMENT OF THE TREASURY
33 WEST STATE STREET, P.O. BOX 230
TRENTON, NJ 08625-0230

Directions to the Division are available on the web at <http://www.state.nj.us/treasury/purchase/directions.shtml>.

Note: Bidders using U.S. Postal Service regular or express mail services should allow additional time since the U.S. Postal Service does not deliver directly to the Procurement Bureau.

Procedural inquiries concerning this RFP may be directed to RFP.procedures@treas.state.nj.us. This e-mail address also may be used to submit requests to review proposal documents. The State will not respond to substantive questions related to the RFP or any other contract via this e-mail address.

To submit an RFP or contract related question, go to the Current Bidding Opportunities webpage or to <http://eBid.nj.gov/QA.aspx>.

1.3.3 ELECTRONIC BIDDING (EBID)

The Division is pleased to announce its electronic procurement modernization process. This RFP provides to the bidder the opportunity to electronically submit its proposal. A new electronic bidding – “eBid” – application is being made available to vendors to promote an easier, more efficient method to submit proposals.

On-line Electronic Bid Training Sessions:

Online electronic bid training for the eBid process is available on the web at <https://wwwnet1.state.nj.us/treasury/dpp/ebid/>. The bidder is strongly encouraged to utilize the on-line training session before attempting to submit an eBid. It will be the bidder's responsibility to ensure that the eBid has been properly submitted.

1.3.4 MANDATORY/OPTIONAL SITE VISIT

Not applicable to this procurement.

1.3.5 OPTIONAL PRE-PROPOSAL CONFERENCE

Not applicable to this procurement.

1.3.6 PRE-PROPOSAL DOCUMENT REVIEW

Not applicable to this procurement.

1.4 ADDITIONAL INFORMATION

1.4.1 ADDENDA: REVISIONS TO THIS RFP

In the event that it becomes necessary to clarify or revise this RFP, such clarification or revision will be by addendum. Any addendum to this RFP will become part of this RFP and part of any contract awarded as a result of this RFP.

ALL RFP ADDENDA WILL BE ISSUED ON THE DIVISION OF PURCHASE AND PROPERTY WEB SITE. TO ACCESS ADDENDA, THE BIDDER MUST SELECT THE PROPOSAL NUMBER ON THE WEB PAGE AT <http://www.state.nj.us/treasury/purchase/bid/summary/bid.shtml>.

There are no designated dates for release of addenda. Therefore interested bidders should check the Division's "Bidding Opportunities" website on a daily basis from time of RFP issuance through the proposal submission opening.

It is the sole responsibility of the bidder to be knowledgeable of all addenda related to this procurement.

1.4.2 BIDDER RESPONSIBILITY

The bidder assumes sole responsibility for the complete effort required in submitting a proposal in response to this RFP. No special consideration will be given after proposals are opened because of a bidder's failure to be knowledgeable as to all of the requirements of this RFP.

1.4.3 COST LIABILITY

The State assumes no responsibility and bears no liability for costs incurred by a bidder in the preparation and submittal of a proposal in response to this RFP.

1.4.4 CONTENTS OF PROPOSAL

Your proposal can be released to the public during the protest period established pursuant to N.J.A.C. 17:12-3.3, or under the New Jersey Open Public Records Act, N.J.S.A. 47:1A-1 et seq., (OPRA) or the common law right to know. As provided in N.J.A.C. 17:12-1.2(b):

Subsequent to the proposal submission opening, all information submitted by bidders in response to a bid solicitation is considered public information, notwithstanding any disclaimers to the contrary submitted by a bidder, except as may be exempted from public disclosure by OPRA and the common law.

Any proprietary and/or confidential information in your proposal will be redacted by the State. A bidder may designate specific information as not subject to disclosure pursuant to the exceptions to OPRA found at N.J.S.A. 47:1A-1.1, when the bidder has a good faith legal and or factual basis for such assertion. The State reserves the right to make the determination as to what is proprietary or confidential, and will advise the bidder accordingly. The location in the proposal of any such designation should be clearly stated in a cover letter. **The State will not honor any attempt by a bidder to designate its entire proposal as proprietary.**

confidential and/or to claim copyright protection for its entire proposal. In the event of any challenge to the bidder's assertion of confidentiality with which the State does not concur, the bidder shall be solely responsible for defending its designation.

By signing the cover sheet of this RFP, the bidder waives any claims of copyright protection set forth within the manufacturer's price list and/or catalogs. The price lists and/or catalogs must be accessible to State using agencies and cooperative purchasing partners and thus have to be made public to allow all eligible purchasing entities access to the pricing information.

1.4.5 PROPOSAL SUBMISSION

On the date and time proposals are due under the RFP, all information concerning the proposals submitted may be publicly announced and those proposals, except for information appropriately designated as proprietary and/or confidential, shall be available for inspection and copying. In those cases where negotiation is contemplated, only the names and addresses of the bidders submitting proposals will be announced and the contents of the proposals shall remain proprietary and/or confidential until the Notice of Intent to Award is issued by the Director.

1.4.6 PRICE ALTERATION IN HARD COPY PROPOSALS

Proposal prices must be typed or written in ink. Any price change (including "white-outs") must be initialed. Failure to initial price changes shall preclude a contract award from being made to the bidder.

1.4.7 BID/PROPOSAL ERRORS

In accordance with N.J.A.C. 17:12-2.11, "Bid Errors," a bidder may withdraw its proposal as described below.

A bidder may request that its proposal be withdrawn prior to the proposal submission opening. Such request must be made, in writing, to the Supervisor of the Bid Review Unit. If the request is granted, the bidder may submit a revised proposal as long as the proposal is received prior to the announced date and time for proposal submission and at the place specified.

If, after the proposal submission opening but before contract award, a bidder discovers an error in its proposal, the bidder may make a written request to the Supervisor of the Bid Review Unit for authorization to withdraw its proposal from consideration for award. Evidence of the bidder's good faith in making this request shall be used in making the determination. The factors that will be considered are that the mistake is so significant that to enforce the contract resulting from the proposal would be unconscionable; that the mistake relates to a material feature of the contract; that the mistake occurred notwithstanding the bidder's exercise of reasonable care; and that the State will not be significantly prejudiced by granting the withdrawal of the proposal. After the proposal submission opening, while pursuant to the provisions of this section, you may request to withdraw your proposal and the Director may, in her discretion allow you to withdraw it, the Division also may take notice of repeated or unusual requests to withdraw by a bidder and take those prior requests to withdraw into consideration when evaluating the bidder's future bids or proposals.

All proposal withdrawal requests must include the proposal identification number and the final proposal submission date and be sent to the following address:

Department of the Treasury
Procurement Bureau
P.O. Box 230
33 West State Street – 9th Floor
Trenton, New Jersey 08625-0230
Attention: Supervisor, Bid Review Unit

If during a proposal evaluation process, an obvious pricing error made by a potential contract awardee is found, the Director shall issue written notice to the bidder. The bidder will have five (5) days after receipt of the notice to confirm its pricing. If the vendor fails to respond, its proposal shall be considered withdrawn, and no further consideration shall be given it.

If it is discovered that there is an arithmetic disparity between the unit price and the total extended price, the unit price shall prevail. If there is any other ambiguity in the pricing other than a disparity between the unit price and extended price and the bidder's intention is not readily discernible from other parts of the proposal, the Director may seek clarification from the bidder to ascertain the true intent of the proposal.

1.4.8 JOINT VENTURE

If a joint venture is submitting a proposal, the agreement between the parties relating to such joint venture should be submitted with the joint venture's proposal. Authorized signatories from each party comprising the joint venture must sign the proposal. A separate Ownership Disclosure Form, Disclosure of Investigations and Actions Involving Bidder form, and Affirmative Action Employee Information Report must be supplied for each party to a joint venture. NOTE: Each party comprising the joint venture must also possess a valid Business Registration Certificate ("BRC") issued by the Department of Treasury, Division of Revenue prior to the award of a contract. Refer to Section 4.4.2.1 of this RFP.

1.4.9 RECIPROCITY FOR JURISDICTIONAL BIDDER PREFERENCE

In accordance with N.J.S.A. 52:32-1.4 and N.J.A.C. 17:12-2.13, the State of New Jersey will invoke reciprocal action against an out-of-State bidder whose state or locality maintains a preference practice for its bidders. For states having preference laws, regulations, or practices, New Jersey will use the annual surveys compiled by the Council of State Governments, National Association of State Purchasing Officials, or the National Institute of Governmental Purchasing to invoke reciprocal actions. The State may obtain additional information as it deems appropriate to supplement the stated survey information.

The bidder may submit information related to preference practices enacted for a local entity outside the State of New Jersey. This information may be submitted in writing as part of the proposal response, including name of the locality having the preference practice, as well as identification of the county and state, and should include a copy of the appropriate documentation, i.e., resolution, regulation, law, notice to bidder, etc. It is the responsibility of the bidder to provide documentation with the proposal or submit it to the Director, Division of Purchase and Property within five (5) working days of the public proposal submission date. Written evidence for a specific procurement that is not provided to the Director within five (5) working days of the public proposal submission date will not be considered in the evaluation of that procurement, but will be retained and considered in the evaluation of subsequent procurements.

1.4.10 PROPOSAL ACCEPTANCES AND REJECTIONS

The Director's right to waive minor elements of non-compliance with bid specifications and N.J.A.C. 17:12-2.2 which defines causes for automatic bid rejection, apply to all proposals. In addition, pursuant to N.J.S.A. 52:34-12(a) and N.J.S.A. 52:18A-19 the Director retains the right to reject all bids if it is in the public interest.

2.0 DEFINITIONS

2.1 GENERAL DEFINITIONS

The following definitions will be part of any contract awarded or order placed as result of this RFP.

Addendum – Written clarification or revision to this RFP issued by the Division of Purchase and Property.

All-Inclusive Hourly Rate – An hourly rate comprised of all direct and indirect costs including, but not limited to: overhead, fee or profit, clerical support, travel expenses, per diem, safety equipment, materials, supplies, managerial support and all documents, forms, and reproductions thereof. This rate also includes portal-to-portal expenses as well as per diem expenses such as food.

Amendment – A change in the scope of work to be performed by the contractor. An amendment is not effective until it is signed by the Director, Division of Purchase and Property.

Bidder – An individual or business entity submitting a proposal in response to this RFP.

Contract – This RFP, any addendum to this RFP, and the bidder's proposal submitted in response to this RFP, as accepted by the State.

Contractor – The bidder awarded a contract resulting from this RFP.

Director – Director, Division of Purchase and Property, Department of the Treasury. By statutory authority, the Director is the chief contracting officer for the State of New Jersey.

Division – The Division of Purchase and Property

Evaluation Committee – A committee established by the Director to review and evaluate proposals submitted in response to this RFP and to recommend a contract award to the Director.

Firm Fixed Price – A price that is all-inclusive of direct cost and indirect costs, including, but not limited to, direct labor costs, overhead, fee or profit, clerical support, equipment, materials, supplies, managerial (administrative) support, all documents, reports, forms, travel, reproduction and any other costs. No additional fees or costs shall be paid by the State unless there is a change in the scope of work.

Joint Venture – A business undertaking by two or more entities to share risk and responsibility for a specific project.

May – Denotes that which is permissible, not mandatory.

Project – The undertaking or services that are the subject of this RFP.

Request for Proposal (RFP) – This document which establishes the bidding and contract requirements and solicits proposals to meet the purchase needs of the using Agencies as identified herein.

Shall or Must – Denotes that which is a mandatory requirement. Failure to meet a mandatory requirement will result in the rejection of a proposal as materially non-responsive.

Should – Denotes that which is recommended, not mandatory.

Small business – Pursuant to N.J.A.C. 17:13-1.2, "small business" means a business that meets the requirements and definitions of "small business" and has applied for and been approved by the New Jersey Division of Revenue, Small Business Unit as (i) independently owned and operated, (ii) incorporated or registered in and has its principal place of business in the State of New Jersey; (iii) has 100 or fewer full-time employees; and has gross revenues falling in one of the three following categories: (A) 0 to \$500,000 (Category I); (B) \$500,001 to \$5,000,000 (Category II); and (C) \$5,000,001 to \$12,000,000, or the applicable federal revenue standards established at 13 CFR 121.201, whichever is higher (Category III).

State – State of New Jersey.

State Contract Manager – The individual responsible for the approval of all deliverables, i.e., tasks, sub-tasks or other work elements in the Scope of Work, as set forth in Sections 8.1, 8.1.1 and 8.1.2.

Subtasks – Detailed activities that comprise the actual performance of a task.

Subcontractor – An entity having an arrangement with a State contractor, where by the State contractor uses the products and/or services of that entity to fulfill some of its obligations under its State contract, while retaining full responsibility for the performance of all of its [the contractor's] obligations under the contract, including payment to the subcontractor. The subcontractor has no legal relationship with the State, only with the contractor.

Task – A discrete unit of work to be performed.

Transaction - The payment or remuneration to the contractor for services rendered or products provided to the State pursuant to the terms of the contract, including but not limited to the following: purchase orders, invoices, hourly rates, firm fixed price, commission payments, progress payments and contingency payments.

Using Agency[ies] – The entity[ies] for which the Division has issued this RFP and will enter into a contract.

2.2 CONTRACT-SPECIFIC DEFINITIONS

ASTM International - American Society for Testing and Materials is an international standards organization that develops and publishes voluntary consensus technical standards for a wide range of materials, products, systems, and services.

ASTM D422 – 63 (2007), Standard Test Method for Particle-Size Analysis of Soils,
<http://www.astm.org/Standards/D422.htm>

ASTM D2487 – 11 (2011), Standard Practice for Classification of Soils for Engineering Purposes(Unified Soil Classification System), <http://www.astm.org/Standards/D2487.htm>

Lithology – 1. The description of rocks [or sediments], especially in hand specimen and in outcrop, on the basis of such characteristics as color, mineralogic composition, and grain size. 2. The physical character of a rock [or sediment]. (paraphrased from the Dictionary of Geological Terms, Third Edition, 1984, Robert L. Bates and Julia A. Jackson, Eds.,, American Geological Institute).

Munsell Color System - is a color space that specifies colors based on three color dimensions: hue, value (lightness), and chroma (color purity). It was created by Professor Albert. H. Munsell in the first decade of the 20th century and adopted by the USDA as the official color system for soil research in the 1930s.

OSHA – Occupational Safety and Health Administration

Sedimentology - The scientific study of sedimentary rocks and of the processes by which they were formed; the description, classification, origin, and interpretation of sediments.

Vibracoring - is a technology and a technique for collecting core samples of underwater sediments and wetland soils. The vibrating mechanism of a vibracorer, sometimes called the "vibrahead", operates on hydraulic, pneumatic, mechanical or electrical power from an external source. The attached core tube is driven into sediment by the force of gravity, enhanced by vibration energy. When the insertion is completed, the vibracorer is turned off, and the tube is withdrawn with the aid of hoist equipment

3.0 SCOPE OF WORK

3.1 GENERAL CORE PROCESSING OFFSHORE SEDIMENT SAMPLES

The work under this contract includes transporting, opening, cleaning, photographing, logging, sampling, wrapping and returning approximately twenty-nine (29) vibracore samples, each measuring approximately twenty (20) feet in length, as detailed in six (6) NJG&WS protocols. NJG&WS may have additional cores for processing later in the contract.

The contractor shall pick-up from and return the core sections to the NJG&WS facility located at 29 Arctic Parkway, Trenton, NJ 08638.

This scope of work is based on best core processing and core photography practices developed by NJG&WS over many years. The six NJG&WS protocols are part of the Scope of Work and are included as supplements in this RFP. In brief, the protocols are:

- Protocol #1 Core cutting and positioning
- Protocol #2 Core section positioning with labels
- Protocol #3 Photographing core sections
- Protocol #4 Lithologic description
- Protocol #5 Core sampling for grain size analysis
- Protocol #6 Core wrapping and return to NJG&WS

The protocols referenced above prepare samples for grain-size analysis based on:

ASTM D422 – 63 (2007), Standard Test Method for Particle-Size Analysis of Soils,
<http://www.astm.org/Standards/D422.htm>

ASTM D2487 – 11 (2011), Standard Practice for Classification of Soils for Engineering Purposes(Unified Soil Classification System), <http://www.astm.org/Standards/D2487.htm>

Folk, R.L., 1980, Petrology of Sedimentary Rocks, Hemphill, Austin, TX, p. 15 – 33, “Collection and preparation of samples for analysis”, (pdf copy available on request from NJG&WS).

In general, the twenty (20) - foot vibracore has been cut into four (4) sections at the time of drilling. Each core section measures about five (5) feet in length. In some cases, the fourth (and deepest) core section is not a full five (5) feet in length. In fewer cases, the last section is longer than five (5) feet. The contractor's sawing jig must be able to fit core sections as long as six (6) feet.

Note on units used and recorded in the core processing - Note that the vibracores are drilled and measured by the drilling contractor in **feet**. NJG&WS records both **feet (in tenths)** and **meters** when photographing the cores. The panoramic photos are created by core section, and the labels for the digital panoramic photo files correspond to the core sections as marked by the core driller, that is, the five (5) foot sections in **feet**. The lithologic log is recorded in **meters**. Grain size samples are collected at thirty (30) - centimeter intervals, measured on the **meter** tape on the core rack, and marked on the sample bags by their metric interval. The wrapped core sections refer back to the sections as they came from the drilling contractor, that is, they are recorded by five (5) foot sections of the drilled core, in **feet**. These unit requirements are described fully and pictured in the protocols.

Core custody – Core sections of transparent PVC tubing containing sediment and measuring approximately five (5) feet in length will be transported from NJG&WS by the contractor. They will be capped with rubber “shoes”, labeled by section on the long dimension of the core. NJG&WS will furnish a spreadsheet inventory of the total number and identification of the vibracores (listing the core sections for each entire vibracore) when the cores are transferred to the contractor. Upon final delivery of the processed cores back to NJG&WS, the contract deliverables will be checked against this inventory sheet and the contractor's inventory of completed vibracores and returned core section halves.

3.2 NUMBER OF SAMPLES AND TESTING PARAMETERS

The contractor shall conduct core processing on approximately twenty-nine (29) vibracores and potentially additional vibracores. NJG&WS may conduct Quality Assurance surveys at any time at the contractor's processing facility to ensure that activities are being performed in compliance with the terms of this RFP. The intent of the Quality Assurance Survey is to ensure good data and practices.

Sample processing must follow the six (6) NJG&WS protocols contained in Supplements One (1) through Six (6) of this RFP. The following is an overview of the samples and testing parameters:

Approximate quantity: twenty-nine (29) full vibracores, transferred to the contractor as approximately one hundred sixteen (116) five (5) - foot sections of sediment-filled PVC tubing: internal tubing diameter is approximately four (4) inches.

Sample material: sand, gravel, silt and clay with some shell material.

Sample custody and return to NJG&WS: details are provided in Protocols # 5 and #6.

3.3 PROJECT MANAGEMENT

The contractor shall designate a Project Manager. The State Contract Manager will communicate with the Project Manager for all work and project matters unless otherwise notified. The contractor shall perform the services with the persons designated in the work program over the contract period. Any changes in personnel shall be reviewed and subject to the approval of the State Contract Manager.

Project management services will include the documentation/deliverable requirements in Section 3.6 of this RFP. Project management services will include oversight of required sample analysis.

3.4 TIMEFRAMES/REPORTING/SCHEDULE

Within one (1) month from request by the State Contract Manager, the contractor shall retrieve the approximately twenty-nine (29) core sections and the custody inventory sheet at NJG&WS (29 Arctic Parkway, Trenton, NJ).

Within five (5) months from request by the State Contract Manager, the contractor shall complete the vibracore processing and return the cores to NJG&WS.

The timeframe for processing of any additional cores shall be negotiated by the contractor and the State Contract Manager.

3.5 EQUIPMENT/FACILITY AND INSPECTION

The contractor shall furnish all processing equipment, including the sawing jig, the core rack, the camera and tripod, magnifying lenses, laboratory spatulas, grain-size cards, tape measures, Munsel Soil Color Chart, plastic sheeting and sample bags. These items may be factored in to the overall bid price. NJG&WS will not specifically reimburse the contractor for any necessary supplies.

The State reserves the right to make final contract award contingent on an inspection of the contractor's or subcontractor's processing facility. Within five (5) business days of the State's request, the bidder shall provide a date for State representatives to perform an inspection of the bidder's facility. Alternatively, if physical inspection by a representative of the State is not feasible, the State may request another method such as photographs, videos etc. to serve the same purpose.

3.6 DELIVERABLES

The contractor shall submit the following four (4) distinct deliverables for each vibracore:

1. A digital merged photomosaic of each five (5) - foot core section and a digital archive of individual photos in both .jpg and .tif uncompressed file formats;
2. A detailed lithologic log of the entire vibracore, prepared on NJG&WS paper log sheets, with scanned .pdf files of the completed and signed log sheets;
3. Grain-size analysis samples (100-120 grams per sample) collected every thirty (30) centimeters down the core [approximately twenty (20) samples per core], labeled, boxed, inventoried, and delivered to NJG&WS; and
4. Sampled and archived core sections [typically four (4) of each per vibracore, a total of eight (8) core section halves] wrapped, labeled, inventoried and returned to NJG&WS. Core halves must be stacked, cut side up, grouped by two (2) for each section.

The contractor shall record and date the completed work on the NJG&WS inventory Excel spreadsheet which shall be provided to the State with all deliverables. Copies of the lithologic log sheets and required core label formats are included as supplements in this RFP.

Once the contractor has provided all deliverables to NJG&WS, the State Contract Manager will verify completion of photographs, lithologic logs, grain size samples and returned wrapped core section halves.

3.7 HEALTH & SAFETY

The contractor is responsible for the cost and implementation of all personnel health and safety requirements in accordance with all applicable laws, regulations, policies and guidelines etc.

The contractor shall observe all applicable OSHA standards, including but not limited to, hearing and eye protection.

3.8 QUALIFICATIONS & REQUIRED EXPERIENCE

Proposals must demonstrate that the contractor has experience, facilities, and support personnel to provide the services required to complete the tasks as described in Section 3.0 of this RFP. Proposals shall identify how long the contractor has been in business under the current organization and name. The following qualifications and experience items must be clearly addressed in the bid proposal:

1. The contractor's personnel must be knowledgeable regarding Microsoft Excel;
2. The contractor's personnel must have experience with lithologic logging and sediment analysis; and
3. The contractor's personnel must demonstrate competency with sediment characterization.

The lithologic descriptions that are submitted to the State Contract Manager, must be supervised and signed by a geologist experienced in preparing lithologic logs of unconsolidated sediments in cores.

The resume of the geologist that will oversee the lithologic logging and sign the logs must be included in the bid proposal. The resume of the geologist shall demonstrate experience with sediment characterization and shall identify three (3) projects and experience with core processing and sampling including a reference and their contact information for each project. Please also refer to Section 4.0 of this RFP for resume requirements.

3.9 CORE TRANSPORT

The approximately twenty-nine (29) cores shall be transported in one batch from NJG&WS to the contractor's facility and back to NJG&WS (29 Arctic Parkway, Trenton, NJ 08638). Any additional cores for processing will need to be transported separately. Transportation costs should be factored into the overall bid price as the State will not pay separate shipping charges. For transport the contractor shall:

1. Transport the cores so that there is a minimum of disturbance to the core contents during transit;
2. Not stack the core sections more than four (4) core sections in height;
3. Not permit the core sections to roll; and
4. On return transport, not stack the core section halves more than eight (8) halves in height.

NJG&WS staff will observe and advise the contractor regarding the loading of the cores at the NJGWS garage at the time of transport.

3.10 PERFORMANCE STANDARDS DURING TERM OF CONTRACT

Contractor performance affects NJG&WS' ability to meet its program needs. Significant or repeated delays, errors, and/or failure to provide the contracted services may be grounds for contract termination, at the State's sole discretion. Unless stated otherwise, the performance criteria identified in this section may lead to contract termination.

The contractor fails to properly transport and handle the cores; and
The contractor fails to have the lithologic logs signed by a qualified geologist;

3.11 INVOICES & REPORTING

The contract work will be completed and paid in three (3) increments for the first approximately twenty-nine (29) vibracores. Once the first approximately (ten) 10 vibracores are fully processed and deliverables provided according to the six (6) protocols and the work reviewed and approved by the State Contract Manager, payment will be issued. The same applies to the next group of approximately ten (10) vibracores and the last group of approximately nine (9) vibracores. Payment for any additional vibracores may be done on a batch basis.

If any work in the three increments has not been performed according to the specifications in the six (6) protocols, or if the deliverables are not per this RFP, the contractor will be required to repeat the process for the affected vibracores/samples. Once these affected cores have been resubmitted and approved, payment for the group of ten (10) will be authorized.

4.0 PROPOSAL PREPARATION AND SUBMISSION

4.1 GENERAL

The bidder is advised to thoroughly read and follow all instructions contained in this RFP, including the instructions on the RFP's signatory page, in preparing and submitting its proposal.

Use of URLs in a proposal should be kept to a minimum and may not be used to satisfy any material term of an RFP. If a preprinted or other document included as part of the proposal contains a URL, a printed (or if a bid is submitted electronically, electronic) copy of the URL page shall be provided and will be considered as part of the proposal. Additional URLs on the copy of the URL page shall not be considered as part of the proposal unless a copy of those URL pages are also provided.

The forms discussed herein and required for submission of a proposal in response to this RFP are available on the web at <http://www.state.nj.us/treasury/purchase/bid/summary/13-X-22672.shtml> unless noted otherwise.

4.2 PROPOSAL DELIVERY AND IDENTIFICATION

In order to be considered, a proposal must arrive at the Division in accordance with the instructions on the RFP signatory page accompanying this RFP. Bidders are cautioned to allow adequate delivery time to ensure timely delivery of proposals. **State regulation mandates that late proposals are ineligible for consideration. THE EXTERIOR OF ALL PROPOSAL PACKAGES ARE TO BE LABELED WITH THE PROPOSAL IDENTIFICATION NUMBER AND THE FINAL PROPOSAL SUBMISSION DATE OR RISK NOT BEING RECEIVED IN TIME.**

4.3 EBID VS. NON-EBID SUBMISSION INSTRUCTION

4.3.1 EBID SUBMISSION OF PROPOSAL

If the bidder is submitting an eBid proposal, hard copy submission is appreciated. Instructions detailing how to enroll in and submit an eBid are available on the web at <https://wwwnet1.state.nj.us/treasury/dpp/ebid/>. If the bidder submits both an eBid and a hard copy of the bidder's proposal, the eBid proposal will prevail in the event of a discrepancy between the electronic and paper versions.

When submitting an eBid, do not use any symbols (i.e., #, @, \$, &, *) in the filename. In addition, the bidder should name each converted PDF electronic file and folder as follows:

4.3.2 NON-EBID SUBMISSION

The bidder must submit the following proposal copies:

One (1) complete ORIGINAL proposal, clearly marked as the "ORIGINAL" proposal.

One (1) complete and exact copies, clearly marked "COPY".

One (1) complete and exact ELECTRONIC copy of the original proposal in PDF file format on disc (CD or DVD) to be viewable and "read only" by State evaluators using Adobe Acrobat Reader software.

Copies are necessary in the evaluation of the proposal and for record retention purposes. A bidder failing to provide the requested number of copies will be charged the cost incurred by the State in producing the requested number of copies. The bidder should make and retain a copy of its proposal.

4.4 PROPOSAL CONTENT

The proposal should be submitted in two volumes with the content of each volume as indicated below.

Volume 1

Section 1 - Forms (Sections 4.4.1 and 4.4.2)

Section 2 - Technical Proposal (Section 4.4.3) – **NOTE: This section of the bidder's submission is limited to 25 pages or fewer, with no smaller than a 12 point font.**

Section 3 - Organizational Support and Experience (Section 4.4.4)

Volume 2

Section 4 – Price Schedule (Section 4.4.5)

4.4.1 FORMS, REGISTRATIONS AND CERTIFICATIONS REQUIRED WITH PROPOSAL

4.4.1.1 SIGNATORY PAGE

The bidder shall complete, including signature of an authorized representative of the bidder, and submit the Signatory Page accompanying this RFP. If the bidder is a limited partnership, the Signatory Page must be signed by a general partner. If the bidder is a joint venture, the Signatory Page must be signed by a principal of each party to the joint venture. Failure to comply will result in rejection of the proposal.

4.4.1.1.1 MACBRIDE PRINCIPLES CERTIFICATION

The bidder must certify pursuant to N.J.S.A. 52:34-12.2 that it is in compliance with the MacBride principles of nondiscrimination in employment as set forth in N.J.S.A. 52:18A-89.5 and in conformance with the United Kingdom's Fair Employment (Northern Ireland) Act of 1989, and permit independent monitoring of their compliance with those principles. Please refer to Section 2.5 of the State of NJ Standard Terms and Conditions and N.J.S.A. 52:34-12.2 for additional information about the McBride principles.

By signing the RFP Signatory Page, or by entering its PIN if submitting an eBid proposal, the bidder/offeror is automatically certifying that either:

- a. The bidder has no operations in Northern Ireland; or
- b. The bidder has business operations in Northern Ireland and is committed to compliance with the MacBride principles.

A bidder/offeror electing not to certify to the MacBride Principles must nonetheless sign the RFP Signatory Page AND must include, as part of its proposal, a statement indicating its refusal to comply with the provisions of this Act.

4.4.1.1.2 NO SUBCONTRACTOR CERTIFICATION

For a proposal that does NOT include the use of any subcontractors, by signing the RFP Signatory Page, or by entering a PIN if submitting an e-Bid proposal, the bidder is *automatically* certifying that:

1. In the event the award is granted to bidder's firm and the bidder later determines at any time during the term of the Contract to engage subcontractors to provide certain goods and/or services, pursuant to Section 5.8 of the State of NJ Standard Terms and Conditions, the bidder will submit a Subcontractor Utilization Plan form for approval to the Division of Purchase and Property in advance of any such engagement of subcontractors.
2. If the contract is a small business subcontracting set-aside, the bidder certifies that in engaging subcontractors, it will make a good faith effort to achieve the subcontracting set-aside goals, and will attach to the Subcontractor Utilization Plan documentation of such efforts in accordance with N.J.A.C. 17:13-4 et seq.

4.4.1.1.3 NON-COLLUSION

By submitting a proposal, the bidder certifies as follows:

- a. The price(s) and amount of its proposal have been arrived at independently and without consultation, communication or agreement with any other contractor, bidder or potential bidder.
- b. Neither the price(s) nor the amount of its proposal, and neither the approximate price(s) nor approximate amount of this proposal, have been disclosed to any other firm or person who is a bidder or potential bidder, and they will not be disclosed before the proposal submission.

- c. No attempt has been made or will be made to induce any firm or person to refrain from bidding on this contract, or to submit a proposal higher than this proposal, or to submit any intentionally high or noncompetitive proposal or other form of complementary proposal.
- d. The proposal of the firm is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive proposal.
- e. The bidder, its affiliates, subsidiaries, officers, directors, and employees are not currently under investigation by any governmental agency and have not in the last four (4) years been convicted or found liable for any act prohibited by state or federal law in any jurisdiction, involving conspiracy or collusion with respect to bidding on any public contract.

4.4.1.1.4 NEW JERSEY BUSINESS ETHICS GUIDE CERTIFICATION

The Treasurer has established a business ethics guide to be followed by State contractors in their dealings with the State. The guide provides further information about compliance with Section 2.8 of the State of New Jersey Standard Terms and Conditions. The guide can be found at:

http://www.state.nj.us/treasury/purchase/ethics_guide.shtml

By signing the RFP signatory page, or by entering a pin if submitting an e-bid proposal, the bidder is automatically certifying that it has read the guide, understands its provisions and is in compliance with its provisions.

4.4.1.2 OWNERSHIP DISCLOSURE FORM

Pursuant to N.J.S.A. 52:24.2, in the event the bidder is a corporation, partnership or sole proprietorship, the bidder must complete the attached Ownership Disclosure Form. A current completed Ownership Disclosure Form must be received prior to or accompany the proposal. Failure to submit the form will preclude the award of a contract.

4.4.1.3 DISCLOSURE OF INVESTIGATIONS AND ACTIONS INVOLVING BIDDER

The bidder shall provide a detailed description of any investigation, litigation, including administrative complaints or other administrative proceedings, involving any public sector clients during the past five (5) years including the nature and status of the investigation, and, for any litigation, the caption of the action, a brief description of the action, the date of inception, current status, and, if applicable, disposition. The bidder shall use the Disclosure of Investigations and Actions Involving Bidder form for this purpose.

4.4.1.4 SUBCONTRACTOR UTILIZATION PLAN

All bidders intending to use a subcontractor must submit a completed Subcontractor Utilization Plan. Please see the State of New Jersey, Division of Purchase and Property's Subcontractor Forms which includes the Subcontractor Utilization Plan form.

4.4.1.5 SMALL BUSINESS REGISTRATION FOR SET-ASIDE CONTRACTS

Not applicable to this procurement.

4.4.1.6 BID SECURITY

Not applicable to this procurement.

4.4.1.7 PRICING

The bidder must submit its pricing on the State supplied Price Sheet/Schedule and supply any additional pricing information as directed in RFP Section 4.4.5.

4.4.2 FORMS REQUIRED BEFORE CONTRACT AWARD AND THAT SHOULD BE SUBMITTED WITH THE PROPOSAL

4.4.2.1 BUSINESS REGISTRATION

In accordance with N.J.S.A. 52:32-44(b), a bidder and its named subcontractors must have a valid Business Registration Certificate ("BRC") issued by the Department of Treasury, Division of Revenue prior to the award of a contract. To facilitate the proposal evaluation and contract award process, the bidder should submit a copy of its valid BRC and those of any named subcontractors with its proposal. Refer to Section 2.1 of the State of NJ Standard Terms and Conditions.

Any bidder, inclusive of any named subcontractors, who does not have a valid business registration at the time of the proposal submission opening or whose BRC was revoked prior to the submission of the proposal should proceed immediately to register its business or seek re-instatement of a revoked BRC. Bidders are cautioned that it may require a significant amount of time to secure the re-instatement of a revoked BRC. The process can require actions by both the Division of Revenue and the Division of Taxation. For this reason, a bidder's early attention to this requirement is highly recommended. The bidder and its named subcontractors may register with the Division of Revenue, obtain a copy of an existing BRC or obtain information necessary to seek re-instatement of a revoked BRC online at <http://www.state.nj.us/treasury/revenue/busregcert.shtml>.

A bidder otherwise identified by the Division as a responsive and responsible bidder, inclusive of any named subcontractors, but that was not business registered at the time of submission of its proposal must be so registered and in possession of a valid BRC by a deadline to be specified in writing by the Division. A bidder who fails to comply with this requirement by the deadline specified by the Division will be deemed ineligible for contract award. Under any circumstance, the Division will rely upon information available from computerized systems maintained by the State as a basis to verify independently compliance with the requirement for business registration.

A bidder receiving a contract award as a result of this procurement and any subcontractors named by that bidder will be required to maintain a valid business registration with the Division of Revenue for the duration of the executed contract, inclusive of any contract extensions.

4.4.2.2 SERVICES SOURCE DISCLOSURE CERTIFICATION FORM

Pursuant to N.J.S.A. 52:34-13.2, prior to an award of contract, the bidder is required to submit a completed source disclosure form. The bidder's inclusion of the completed Services Source Disclosure Form with the proposal is requested and advised. Refer to RFP Section 7.1.2 for additional information concerning this requirement.

4.4.3 TECHNICAL PROPOSAL

In this section, the bidder shall describe its approach and plans for accomplishing the work outlined in the Scope of Work section, i.e., Section 3.0. The bidder must set forth its understanding of the requirements of this RFP and its ability to successfully complete the contract. This section of the proposal should minimally contain the information identified below.

4.4.3.1 MANAGEMENT OVERVIEW

The bidder should set forth its overall technical approach and plans to meet the requirements of the RFP in a narrative format. This narrative should convince the State that the bidder understands the objectives that the

contract is intended to meet, the nature of the required work and the level of effort necessary to successfully complete the contract. This narrative should convince the State that the bidder's general approach and plans to undertake and complete the contract are appropriate to the tasks and subtasks involved.

Mere reiterations of RFP tasks and subtasks are strongly discouraged, as they do not provide insight into the bidder's ability to complete the contract. The bidder's response to this section should be designed to convince the State that the bidder's detailed plans and approach proposed to complete the Scope of Work are realistic, attainable and appropriate and that the bidder's proposal will lead to successful contract completion.

4.4.3.2 CONTRACT MANAGEMENT

The bidder should describe its specific plans to manage, control and supervise the contract to ensure satisfactory contract completion according to the required schedule. The plan should include the bidder's approach to communicate with the State Contract Manager including, but not limited to, status meetings, status reports, etc.

4.4.3.3 CONTRACT SCHEDULE

Not applicable to this procurement.

4.4.3.4 MOBILIZATION AND IMPLEMENTATION PLAN

Not applicable to this procurement.

4.4.3.5 POTENTIAL PROBLEMS

The bidder should set forth a summary of any and all problems that the bidder anticipates during the term of the contract. For each problem identified, the bidder should provide its proposed solution.

4.4.4 ORGANIZATIONAL SUPPORT AND EXPERIENCE

The bidder should include information relating to its organization, personnel, and experience, including, but not limited to, references, together with contact names and telephone numbers, evidencing the bidder's qualifications, and capabilities to perform the services required by this RFP. This section of the proposal must minimally contain the information identified below.

4.4.4.1 LOCATION

The bidder should include the address of the bidder's office where responsibility for managing the contract will take place. The bidder should include the telephone number and name of the individual to contact.

4.4.4.2 ORGANIZATION CHARTS

a. **Contract-Specific Chart.** The bidder should include a contract organization chart, with names showing management, supervisory and other key personnel (including subcontractor management, supervisory or other key personnel) to be assigned to the contract. The chart should include the labor category and title of each such individual.

b. **Chart for Entire Firm.** The bidder should include an organization chart showing the bidder's entire organizational structure. This chart should show the relationship of the individuals assigned to the contract to the bidder's overall organizational structure.

4.4.4.3 RESUMES

Detailed resumes should be submitted for all management, supervisory and key personnel to be assigned to the contract. The resume of the geologist that will oversee the lithologic logging and sign the logs must be included in the bid proposal. The resume of the geologist shall demonstrate experience with sediment characterization and core processing. Resumes shall emphasize relevant qualifications and experience of these individuals in successfully completing contracts of a similar size and scope to those required by this RFP. Resumes should include the following:

- The individual's previous experience in completing each similar contract.
- Beginning and ending dates for each similar contract.
- A description of the contract demonstrating how the individual's work on the completed contract relates to the individual's ability to contribute to successfully providing the services required by this RFP.
- With respect to each similar contract, the name and address of each reference together with a person to contact for a reference check and a telephone number.

The bidder should provide detailed resumes for each subcontractor's management, supervisory and other key personnel that demonstrate knowledge, ability and experience relevant to that part of the work which the subcontractor is designated to perform. When a bidder submits resumes pursuant to this paragraph, the bidder should redact the social security numbers, home addresses, personal telephone numbers and any other personally identifying information other than the individual's name from the resume.

4.4.4.4 BACKUP STAFF

The bidder should include a list of backup staff that may be called upon to assist or replace primary individuals assigned. Backup staff must be clearly identified as backup staff.

In the event the bidder must hire management, supervisory and/or key personnel if awarded the contract, the bidder should include, as part of its recruitment plan, a plan to secure backup staff in the event personnel initially recruited need assistance or need to be replaced during the contract term.

The contractor shall notify the State Contract Manager of project staff changes or new hires for the project by submitting the resumes of the replacement staff to the State Contract Manager for their review as soon as that person is assigned to the project.

4.4.4.5 EXPERIENCE WITH CONTRACTS OF SIMILAR SIZE AND SCOPE

The bidder shall provide three (3) projects/contracts of similar size and scope that it has successfully completed, as evidence of the bidder's ability to successfully complete the services required by this RFP. Emphasis should be placed on contracts that are similar in size and scope to the work required by this RFP. A description of all such contracts shall be included and should show how such contracts relate to the ability of the firm to complete the services required by this RFP. For each such contract, the bidder should provide a name and telephone number of individuals for the other contract party. Beginning and ending dates shall also be given for each contract.

The bidder should provide documented experience to demonstrate that each subcontractor has successfully performed work on contracts of a similar size and scope to the work that the subcontractor is designated to perform in the bidder's proposal. The bidder must provide a detailed description of services to be provided by each subcontractor.

4.4.4.6 FINANCIAL CAPABILITY OF THE BIDDER

In order to provide the State with the ability to judge the bidder's financial capacity and capabilities to undertake and successfully complete the contract, the bidder should submit certified financial statements which include a balance sheet, income statement and statement of cash flow, and all applicable notes for the most recent calendar year or the bidder's most recent fiscal year. If certified financial statements are not available, the bidder should provide either a reviewed or compiled statement from an independent accountant setting forth the same information required for the certified financial statements, together with a certification from the Chief Executive Officer and the Chief Financial Officer, that the financial statements and other information included in the statements fairly present in all material respects the financial condition, results of operations and cash flows of the bidder as of, and for, the periods presented in the statements. In addition, the bidder should submit a bank reference.

If the information is not supplied with the proposal, the State may still require the bidder to submit it. If the bidder fails to comply with the request within seven (7) business days, the State may deem the proposal non-responsive.

A bidder may designate specific financial information as not subject to disclosure when the bidder has a good faith legal/factual basis for such assertion. A bidder may submit specific financial documents in a separate, sealed package clearly marked "Confidential-Financial Information" along with the proposal.

The State reserves the right to make the determination to accept the assertion and shall so advise the bidder.

4.4.5 PRICE SCHEDULE/SHEET

The bidder must submit its pricing using the format set forth in the State-supplied price sheet/schedule(s) accompanying this RFP. Failure to submit all information required will result in the proposal being considered non-responsive. Each bidder is required to hold its prices firm through issuance of contract.

A bidder may not submit multiple prices on a price line and may not submit ranges of prices on a price line.

4.4.5.1 DELIVERY COSTS

Unless otherwise noted elsewhere in the RFP, all prices for items in proposals shall be submitted F.O.B. destination. Proposals submitted other than F.O.B. destination may not be considered. Regardless of the method of quoting shipments, the contractor shall assume all costs, liability and responsibility for the delivery of merchandise in good condition to the State's using agency or designated purchaser.

F.O.B. destination does not cover "spotting" but does include delivery on the receiving platform of the ordering agency at any destination in the State of New Jersey unless otherwise specified. No additional charges will be allowed for any additional transportation costs resulting from partial shipments made at contractor's convenience when a single shipment is ordered. The weights and measures of the State's using agency receiving the shipment shall govern.

4.4.5.2 C.O.D. TERMS

C.O.D. terms are not acceptable as part of a proposal and will be cause for rejection of a proposal.

4.4.5.3 CASH DISCOUNTS

Bidders are encouraged to offer cash discounts based on expedited payment by the State. The State will make efforts to take advantage of discounts, but discounts will not be considered in determining the lowest proposal.

- a. Discount periods shall be calculated starting from the next business day after the Using Agency has accepted the goods or services, received a properly signed and executed invoice and, when required, a properly executed performance security, whichever is latest.
- b. The date on the check issued by the State in payment of that invoice shall be deemed the date of the State's response to that invoice.

4.4.6 COOPERATIVE PURCHASING

Not applicable to this procurement.

5.0 SPECIAL CONTRACTUAL TERMS AND CONDITIONS

5.1 PRECEDENCE OF SPECIAL CONTRACTUAL TERMS AND CONDITIONS

The contract awarded as a result of this RFP shall consist of this RFP, addenda to this RFP, the contractor's proposal, any best and final offer and the Division's Notice of Award.

Unless specifically stated within this RFP, the Special Contractual Terms and Conditions of the RFP take precedence over the State of NJ Standard Terms and Conditions accompanying this RFP.

In the event of a conflict between the provisions of this RFP, including the Special Contractual Terms and Conditions and the State of NJ Standard Terms and Conditions, and any addendum to this RFP, the addendum shall govern.

In the event of a conflict between the provisions of this RFP, including any addendum to this RFP, and the bidder's proposal, the RFP and/or the addendum shall govern.

5.2 CONTRACT TERM AND EXTENSION OPTION

The term of the contract shall be for a period of two (2) years. The anticipated "Contract Effective Date" is provided on the signatory page accompanying this RFP. If delays in the procurement process result in a change to the anticipated Contract Effective Date, the bidder agrees to accept a contract for the full term of the contract.

The contract may be extended for all or part of a one (1) year period, by the mutual written consent of the contractor and the Director at the same terms, conditions, and pricing at the rates in effect in the last year of the contract or rates more favorable to the State.

5.3 CONTRACT TRANSITION

In the event that a new contract has not been awarded prior to the contract expiration date, as may be extended herein, it shall be incumbent upon the contractor to continue the contract under the same terms and conditions until a new contract can be completely operational. At no time shall this transition period extend more than ninety (90) days beyond the expiration date of the contract.

5.4 CONTRACT AMENDMENT

Any changes or modifications to the terms of the contract shall be valid only when they have been reduced to writing and signed by the contractor and the Director.

5.5 CONTRACTOR RESPONSIBILITIES

The contractor shall have sole responsibility for the complete effort specified in the contract. Payment will be made only to the contractor. The contractor shall have sole responsibility for all payments due any subcontractor.

The contractor is responsible for the professional quality, technical accuracy and timely completion and submission of all deliverables, services or commodities required to be provided under the contract. The contractor shall, without additional compensation, correct or revise any errors, omissions, or other deficiencies in its deliverables and other services. The approval of deliverables furnished under this contract shall not in any way relieve the contractor of responsibility for the technical adequacy of its work. The review, approval, acceptance or payment for any of the services shall not be construed as a waiver of any rights that the State may have arising out of the contractor's performance of this contract.

5.6 SUBSTITUTION OF STAFF

The contractor shall forward a request to substitute staff to the State Contract Manager for consideration and approval. No substitute personnel are authorized to begin work until the contractor has received written approval to proceed from the State Contract Manager.

If it becomes necessary for the contractor to substitute any management, supervisory or key personnel, the contractor shall identify the substitute personnel and the work to be performed. The contractor must provide detailed justification documenting the necessity for the substitution. Resumes must be submitted evidencing that the individual(s) proposed as substitute(s) have qualifications and experience equal to or better than the individual(s) originally proposed or currently assigned.

5.7 SUBSTITUTION OR ADDITION OF SUBCONTRACTOR(S)

This Subsection serves to supplement but not to supersede Sections 5.8 and 5.9 of the State of NJ Standard Terms and Conditions accompanying this RFP.

The contractor shall forward a written request to substitute or add a subcontractor or to substitute its own staff for a subcontractor to the State Contract Manager for consideration. If the State Contract Manager approves the request, the State Contract Manager will forward the request to the Director for final approval. No substituted or additional subcontractors are authorized to begin work until the contractor has received written approval from the Director.

If it becomes necessary for the contractor to substitute a subcontractor, add a subcontractor or substitute its own staff for a subcontractor, the contractor will identify the proposed new subcontractor or staff member(s) and the work to be performed. The contractor must provide detailed justification documenting the necessity for the substitution or addition.

The contractor must provide detailed resumes of its proposed replacement staff or of the proposed subcontractor's management, supervisory and other key personnel that demonstrate knowledge, ability and experience relevant to that part of the work which the subcontractor is to undertake.

The qualifications and experience of the replacement(s) must equal or exceed those of similar personnel proposed by the contractor in its proposal.

5.8 OWNERSHIP OF MATERIAL

All data, technical information, materials gathered, originated, developed, prepared, used or obtained in the performance of the contract, including, but not limited to, all reports, surveys, plans, charts, literature, brochures, mailings, recordings (video and/or audio), pictures, drawings, analyses, graphic representations, software computer programs and accompanying documentation and print-outs, notes and memoranda, written

procedures and documents, regardless of the state of completion, which are prepared for or are a result of the services required under this contract shall be and remain the property of the State of New Jersey and shall be delivered to the State of New Jersey upon thirty (30) days notice by the State. With respect to software computer programs and/or source codes developed for the State, the work shall be considered "work for hire", i.e., the State, not the contractor or subcontractor, shall have full and complete ownership of all software computer programs and/or source codes developed. To the extent that any of such materials may not, by operation of the law, be a work made for hire in accordance with the terms of this Contract, contractor or subcontractor hereby assigns to the State all right, title and interest in and to any such material, and the State shall have the right to obtain and hold in its own name and copyrights, registrations and any other proprietary rights that may be available.

Should the bidder anticipate bringing pre-existing intellectual property into the project, the intellectual property must be identified in the proposal. Otherwise, the language in the first paragraph of this section prevails. If the bidder identifies such intellectual property ("Background IP") in its proposal, then the Background IP owned by the bidder on the date of the contract, as well as any modifications or adaptations thereto, remain the property of the bidder. Upon contract award, the bidder or contractor shall grant the State a non-exclusive, perpetual royalty free license to use any of the bidder/contractor's Background IP delivered to the State for the purposes contemplated by the contract.

5.9 SECURITY AND CONFIDENTIALITY

5.9.1 DATA CONFIDENTIALITY

All financial, statistical, personnel, customer and/or technical data supplied by the State to the contractor are confidential. The contractor must secure all data from manipulation, sabotage, theft or breach of confidentiality. The contractor is prohibited from releasing any financial, statistical, personnel, customer and/or technical data supplied by the State that is deemed confidential. Any use, sale, or offering of this data in any form by the contractor, or any individual or entity in the contractor's charge or employ, will be considered a violation of this contract and may result in contract termination and the contractor's suspension or debarment from State contracting. In addition, such conduct may be reported to the State Attorney General for possible criminal prosecution.

The contractor shall assume total financial liability incurred by the contractor associated with any breach of confidentiality.

5.10 NEWS RELEASES

The contractor is not permitted to issue news releases pertaining to any aspect of the services being provided under this contract without the prior written consent of the Director.

5.11 ADVERTISING

The contractor shall not use the State's name, logos, images, or any data or results arising from this contract as a part of any commercial advertising without first obtaining the prior written consent of the Director.

5.12 LICENSES AND PERMITS

The contractor shall obtain and maintain in full force and effect all required licenses, permits, and authorizations necessary to perform this contract. The contractor shall supply the State Contract Manager with evidence of all such licenses, permits and authorizations. This evidence shall be submitted subsequent to the contract award. All costs associated with any such licenses, permits and authorizations must be considered by the bidder in its proposal.

5.13 CLAIMS AND REMEDIES

5.13.1 CLAIMS

All claims asserted against the State by the contractor shall be subject to the New Jersey Tort Claims Act, N.J.S.A. 59:1-1, et seq., and/or the New Jersey Contractual Liability Act, N.J.S.A. 59:13-1, et seq.

5.13.2 REMEDIES

Nothing in the contract shall be construed to be a waiver by the State of any warranty, expressed or implied, of any remedy at law or equity, except as specifically and expressly stated in a writing executed by the Director.

5.13.3 REMEDIES FOR FAILURE TO COMPLY WITH MATERIAL CONTRACT REQUIREMENTS

In the event that the contractor fails to comply with any material contract requirements, the Director may take steps to terminate the contract in accordance with the State of NJ Standard Terms and Conditions, authorize the delivery of contract items by any available means, with the difference between the price paid and the defaulting contractor's price either being deducted from any monies due the defaulting contractor or being an obligation owed the State by the defaulting contractor as provided for in the State administrative code, or take any other action or seek any other remedies available at law or in equity.

5.14 LATE DELIVERY

The contractor must immediately advise the State Contract Manager of any circumstance or event that could result in late completion of any task or subtask called for to be completed on a date certain.

5.15 RETAINAGE

Not applicable to this procurement.

5.16 ADDITIONAL WORK AND/OR SPECIAL PROJECTS

The contractor shall not begin performing any additional work or special projects without first obtaining written approval from both the State Contract Manager and the Director.

In the event of additional work and/or special projects, the contractor must present a written proposal to perform the additional work to the State Contract Manager. The proposal should provide justification for the necessity of the additional work. The relationship between the additional work and the base contract work must be clearly established by the contractor in its proposal.

The contractor's written proposal must provide a detailed description of the work to be performed broken down by task and subtask. The proposal should also contain details on the level of effort, including hours, labor categories, etc., necessary to complete the additional work.

The written proposal must detail the cost necessary to complete the additional work in a manner consistent with the contract. The written price schedule must be based upon the hourly rates, unit costs or other cost elements submitted by the contractor in the contractor's original proposal submitted in response to this RFP. Whenever possible, the price schedule should be a firm, fixed price to perform the required work. The firm fixed price should specifically reference and be tied directly to costs submitted by the contractor in its original proposal. A payment schedule, tied to successful completion of tasks and subtasks, must be included.

Upon receipt and approval of the contractor's written proposal, the State Contract Manager shall forward same to the Director for the Director's written approval. Complete documentation from the Using Agency, confirming the need for the additional work, must be submitted. Documentation forwarded by the State Contract Manager

to the Director must include all other required State approvals, such as those that may be required from the State of New Jersey's Office of Management and Budget and NJOIT.

No additional work and/or special project may commence without the Director's written approval. In the event the contractor proceeds with additional work and/or special projects without the Director's written approval, it shall be at the contractor's sole risk. The State shall be under no obligation to pay for work performed without the Director's written approval.

5.17 MODIFICATIONS AND CHANGES TO THE STATE OF NJ STANDARD TERMS AND CONDITIONS

The indemnification provisions set forth in the State of NJ Standard Terms and Conditions, Section 4.1 shall prevail.

5.17.2 INSURANCE - PROFESSIONAL LIABILITY INSURANCE

Not applicable to this procurement.

5.18 CONTRACT ACTIVITY REPORT

Not applicable to this procurement.

5.19 ELECTRONIC PAYMENTS

With the award of this contract, the successful vendor(s) will be required to receive their payment(s) electronically. In order to receive your payments via automatic deposit from the State of New Jersey, complete and return the "Credit Authorization Agreement for Automatic Deposits (ACH Credits)" Form with an **original voided check or bank letter**. The form must include ABA number (routing or transit number), bank account number and if the bank account is a checking or savings account. The form and instructions are located on the Office of Management & Budget's website at: <http://www.state.nj.us/treasury/omb/forms/index.shtml>. The completed form along with the required voided check or bank letter should be mailed or faxed to: Department of the Treasury, Office of Management and Budget, PO Box 221, 6TH Floor – Room 674, Trenton, N.J. 08625-0221; fax: (609)-984-5210. To assist in identifying payments, the State offers vendors access to the Vendor Payment Inquiry web application (VPI) which offers check stub information online. Contact the State of New Jersey at AAIUNIT@treas.state.nj.us to request access to this application.

5.20 PROGRAM EFFICIENCY ASSESSMENT

The State Using Agencies shall be charged an assessment equal to one-quarter of one percent (0.25%) of the value of all transactions under this contract. This assessment is authorized by N.J.S.A 52:27B-56 and N.J.A.C 17:12-1.5, to maintain the State's procurement system at a level to meet industry standards of efficiency.

6.0 PROPOSAL EVALUATION

6.1 RIGHT TO WAIVE

The Director reserves the right to waive minor irregularities. The Director also reserves the right to waive a mandatory requirement provided that:

- (1) the requirement is not mandated by law;
- (2) all of the otherwise responsive proposals failed to meet the requirement; and

(3) in the sole discretion of the Director, the failure to comply with the requirement does not materially affect the procurement or the State's interests associated with the procurement.

6.2 DIRECTOR'S RIGHT OF FINAL PROPOSAL ACCEPTANCE

The Director reserves the right to reject any or all proposals, or to award in whole or in part if deemed to be in the best interest of the State to do so. The Director shall have authority to award orders or contracts to the vendor or vendors best meeting all specifications and conditions in accordance with N.J.S.A. 52:34-12. Tie proposals will be awarded by the Director in accordance with N.J.A.C.17:12-2.10.

6.3 STATE'S RIGHT TO INSPECT BIDDER'S FACILITIES

The State reserves the right to inspect the bidder's establishment before making an award, for the purposes of ascertaining whether the bidder has the necessary facilities for performing the contract.

The State may also consult with clients of the bidder during the evaluation of bids. Such consultation is intended to assist the State in making a contract award which is most advantageous to the State.

6.4 STATE'S RIGHT TO REQUEST FURTHER INFORMATION

The Director reserves the right to request all information which may assist him or her in making a contract award, including factors necessary to evaluate the bidder's financial capabilities to perform the contract. Further, the Director reserves the right to request a bidder to explain, in detail, how the proposal price was determined.

6.5 PROPOSAL EVALUATION COMMITTEE

Proposals may be evaluated by an Evaluation Committee composed of members of affected departments and agencies together with representative(s) from the Division. Representatives from other governmental agencies may also serve on the Evaluation Committee. On occasion, the Evaluation Committee may choose to make use of the expertise of outside consultant(s) in an advisory role.

6.6 ORAL PRESENTATION AND/OR CLARIFICATION OF PROPOSAL

After the submission of proposals, unless requested by the State as noted below, vendor contact with the State is still not permitted.

After the proposals are reviewed, one, some or all of the bidders may be asked to clarify certain aspects of their proposals. A request for clarification may be made in order to resolve minor ambiguities, irregularities, informalities or clerical errors. Clarifications cannot correct any deficiencies or material omissions or revise or modify a proposal, except to the extent that correction of apparent clerical mistakes results in a modification.

The bidder may be required to give an oral presentation to the State concerning its proposal.

Bidders may not attend the oral presentations of their competitors.

It is within the State's discretion whether to require the bidder to give an oral presentation or require the bidder to submit written responses to questions regarding its proposal. Action by the State in this regard should not be construed to imply acceptance or rejection of a proposal. The Division will be the sole point of contact regarding any request for an oral presentation or clarification.

6.7 EVALUATION CRITERIA

The following evaluation criteria categories, not necessarily listed in order of significance, will be used to evaluate proposals received in response to this RFP. The evaluation criteria categories may be used to develop more detailed evaluation criteria to be used in the evaluation process:

6.7.1 TECHNICAL EVALUATION CRITERIA

- a. Personnel: The qualifications and experience of the bidder's management, supervisory, and key personnel assigned to the contract, including the candidates recommended for each of the positions/roles required.
- b. Experience of firm: The bidder's documented experience in successfully completing contracts of a similar size and scope in relation to the work required by this RFP.
- c. Ability of firm to implement and perform the Scope of Work based on the presentation in its Technical Proposal: The overall ability of the bidder to undertake and successfully perform the technical requirements of the Scope of Work as demonstrated by its presentation in the Technical Proposal.

6.7.2 BIDDER'S PRICE SCHEDULE

For evaluation purposes, bidders will be ranked according to the total proposal price located on the Price Sheet/Schedule accompanying this RFP.

6.7.3 PROPOSAL DISCREPANCIES

In evaluating proposals, discrepancies between words and figures will be resolved in favor of words. Discrepancies between unit prices and totals of unit prices will be resolved in favor of unit prices. Discrepancies in the multiplication of units of work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated total of multiplied unit prices and units of work and the actual total will be resolved in favor of the actual total. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum of the column of figures.

6.7.4 EVALUATION OF THE PROPOSALS

After the Evaluation Committee completes its evaluation, it recommends to the Director for award the responsible bidder whose proposal, conforming to this RFP, is most advantageous to the State, price and other factors considered. The Evaluation Committee considers and assesses price, technical criteria, and other factors during the evaluation process and makes a recommendation to the Director. The Director may accept, reject or modify the recommendation of the Evaluation Committee. Whether or not there has been a negotiation process as outlined in Section 6.8 below, the Director reserves the right to negotiate price reductions with the selected bidder.

6.8 NEGOTIATION AND BEST AND FINAL OFFER (BAFO)

After evaluating proposals, the Division may enter into negotiations with one bidder or multiple bidders. The primary purpose of negotiations is to maximize the State's ability to obtain the best value based on the mandatory requirements, evaluation criteria, and cost. Multiple rounds of negotiations may be conducted with one bidder or multiple bidders. Negotiations will be structured by the Division to safeguard information and ensure that all bidders are treated fairly.

Similarly, the Division may invite one bidder or multiple bidders to submit a best and final offer (BAFO). Said invitation will establish the time and place for submission of the BAFO. Any BAFO that is not equal to or

lower in price than the pricing offered in the bidder's original proposal will be rejected as non-responsive and the State will revert to consideration and evaluation of the bidder's original pricing.

If required, after review of the BAFO(s), clarification may be sought from the bidder(s). The Division may conduct more than one round of negotiation and/or BAFO in order to attain the best value for the State.

After evaluation of proposals and as applicable, negotiation(s) and/or BAFO(s), the Division will recommend, to the Director, the responsible bidder(s) whose proposal(s), conforming to the RFP, is/are most advantageous to the State, price and other factors considered. The Director may accept, reject or modify the recommendation of the Division. The Director may initiate additional negotiation or BAFO procedures with the selected bidder(s).

Negotiations will be conducted only in those circumstances where they are deemed by the Division or Director to be in the State's best interests and to maximize the State's ability to get the best value. Therefore, the bidder is advised to submit its best technical and price proposal in response to this RFP since the State may, after evaluation, make a contract award based on the content of the initial submission, without further negotiation and/or BAFO with any bidder.

All contacts, records of initial evaluations, any correspondence with bidders related to any request for clarification, negotiation or BAFO, any revised technical and/or price proposals, the Evaluation Committee Report and the Award Recommendation, will remain confidential until a Notice of Intent to Award a contract is issued.

NOTE: If the Division contemplates negotiation, proposal prices will not be publicly read at the proposal submission opening. Only the name and address of each bidder will be publicly announced at the proposal submission opening.

6.9 COMPLAINTS

A bidder with a history of performance problems as demonstrated by formal complaints and/or contract cancellations for cause pursuant to Section 5.7.b of the State of NJ Standard Terms and Conditions accompanying this RFP may be bypassed for an award issued as a result of this RFP.

7.0 CONTRACT AWARD

7.1 DOCUMENTS REQUIRED BEFORE CONTRACT AWARD

7.1.1 REQUIREMENTS OF PUBLIC LAW 2005, CHAPTER 51, N.J.S.A. 19:44A-20.13 - N.J.S.A. 19:44A-20.25 (FORMERLY EXECUTIVE ORDER 134) AND EXECUTIVE ORDER NO. 117 (2008)

a) The State shall not enter into a contract to procure from any Business Entity services or any material, supplies or equipment, or to acquire, sell or lease any land or building, where the value of the transaction exceeds \$17,500, if that Business Entity has solicited or made any contribution of money, or pledge of contribution, including in-kind contributions, to a candidate committee and/or election fund of any candidate for or holder of the public office of Governor or Lieutenant Governor, to any State, county, municipal political party committee, or to any legislative leadership committee during certain specified time periods

b) Prior to awarding any contract or agreement to any Business Entity, the Business Entity proposed as the intended awardee of the contract shall submit the Certification and Disclosure form, certifying that no contributions prohibited by either Chapter 51 or Executive Order No. 117 have been made by the Business Entity and reporting all contributions the Business Entity made during the preceding four years to any political organization organized under 26 U.S.C.527 of the Internal Revenue Code that also meets the definition of a "continuing political committee" within the means of N.J.S.A. 19:44A-3(n) and N.J.A.C. 19:25-1.7. The required form and instructions, available for review on the Division's website at

<http://www.state.nj.us/treasury/purchase/forms.shtml#eo134>, shall be provided to the intended awardee for completion and submission to the Division with the Notice of Intent to Award. Upon receipt of a Notice of Intent to Award a Contract, the intended awardee shall submit to the Division, in care of the Division Procurement Specialist, the Certification and Disclosure(s) within five (5) business days of the State's request. Failure to submit the required forms will preclude award of a contract under this RFP, as well as future contract opportunities.

c) Further, the Contractor is required, on a continuing basis, to report any contributions it makes during the term of the contract, and any extension(s) thereof, at the time any such contribution is made. The required form and instructions, available for review on the Division's website at <http://www.state.nj.us/treasury/purchase/forms.shtml#eo134>, shall be provided to the intended awardee with the Notice of Intent to Award.

7.1.2 SOURCE DISCLOSURE REQUIREMENTS

Pursuant to N.J.S.A. 52:34-13.2, all contracts primarily for services awarded by the Director shall be performed within the United States, except when the Director certifies in writing a finding that a required service cannot be provided by a contractor or subcontractor within the United States and the certification is approved by the State Treasurer. Also refer to Section 3.6 Service Performance Within U.S. of the State of NJ Standard Terms and Conditions.

Pursuant to the statutory requirements, the intended awardee of a contract primarily for services with the State of New Jersey must disclose the location by country where services under the contract, including subcontracted services, will be performed. The Source Disclosure Certification form accompanies the subject RFP. FAILURE TO SUBMIT SOURCING INFORMATION WHEN REQUESTED BY THE STATE SHALL PRECLUDE AWARD OF A CONTRACT TO THE BIDDER.

If any of the services cannot be performed within the United States, the bidder shall state with specificity the reasons why the services cannot be so performed. The Director shall determine whether sufficient justification has been provided by the bidder to form the basis of his or her certification that the services cannot be performed in the United States and whether to seek the approval of the Treasurer.

7.1.2.1 BREACH OF CONTRACT

A SHIFT TO PROVISION OF SERVICES OUTSIDE THE UNITED STATES DURING THE TERM OF THE CONTRACT SHALL BE DEEMED A BREACH OF CONTRACT. If, during the term of the contract, the contractor or subcontractor, who had on contract award declared that services would be performed in the United States, proceeds to shift the performance of any of the services outside the United States, the contractor shall be deemed to be in breach of its contract. Such contract shall be subject to termination for cause pursuant to Section 5.7b.1 of the State of NJ Standard Terms and Conditions, unless such shift in performance was previously approved by the Director and the Treasurer.

7.1.3 AFFIRMATIVE ACTION

The intended awardee must submit a copy of a New Jersey Certificate of Employee Information Report, or a copy of Federal Letter of Approval verifying it is operating under a federally approved or sanctioned Affirmative Action program. Intended awardee(s) not in possession of either a New Jersey Certificate of Employee Information Report or a Federal Letter of Approval must complete the Affirmative Action Employee Information Report (AA-302) located on the web at http://www.nj.gov/treasury/purchase/forms/AA_%20Supplement.pdf.

7.1.4 BUSINESS REGISTRATION

In accordance with N.J.S.A. 52:32-44(b), a bidder and its named subcontractors must have a valid Business Registration Certificate ("BRC") issued by the Department of Treasury, Division of Revenue prior to the award of a contract. (Refer to Section 4.4.2.1 of this RFP for further information.)

7.2 FINAL CONTRACT AWARD

Contract award shall be made with reasonable promptness by written notice to that responsible bidder, whose proposal, conforming to this RFP, is most advantageous to the State, price, and other factors considered. Any or all proposals may be rejected when the State Treasurer or the Director determines that it is in the public interest to do so.

7.3 INSURANCE CERTIFICATES

The contractor shall provide the State with current certificates of insurance for all coverages required by the terms of this contract, naming the State as an Additional Insured. Refer to Section 4.2 of the State of NJ Standard Terms and Conditions accompanying this RFP.

7.4 PERFORMANCE SECURITY

Not applicable to this procurement.

8.0 CONTRACT ADMINISTRATION

8.1 CONTRACT MANAGER

The State Contract Manager is the State employee responsible for the overall management and administration of the contract.

The State Contract Manager for this project will be identified at the time of execution of contract. At that time, the contractor will be provided with the State Contract Manager's name, department, division, agency, address, telephone number, fax phone number, and e-mail address.

8.1.1 STATE CONTRACT MANAGER RESPONSIBILITIES

For an agency contract where only one State office uses the contract, the State Contract Manager will be responsible for engaging the contractor, assuring that Purchase Orders are issued to the contractor, directing the contractor to perform the work of the contract, approving the deliverables and approving payment vouchers. The State Contract Manager is the person that the contractor will contact **after the contract is executed** for answers to any questions and concerns about any aspect of the contract. The State Contract Manager is responsible for coordinating the use of the Contract and resolving minor disputes between the contractor and any component part of the State Contract Manager's Department.

If the contract has multiple users, then the State Contract Manager shall be the central coordinator of the use of the contract for all Using Agencies, while other State employees engage and pay the contractor. All persons and agencies that use the contract must notify and coordinate the use of the contract with the State Contract Manager.

8.1.2 COORDINATION WITH THE STATE CONTRACT MANAGER

Any contract user that is unable to resolve disputes with a contractor shall refer those disputes to the State Contract Manager for resolution. Any questions related to performance of the work of the contract by contract

users shall be directed to the State Contract Manager. The contractor may contact the State Contract Manager if the contractor cannot resolve a dispute with contract users.

9.0 Special Contract Requirements Relating to Work Funded under the American Recovery and Reinvestment Act of 2009 (ARRA)

Not applicable to this procurement.

Supplement Number One (1)

Protocol #1: Core section opening and positioning on processing rack

Opening the core sections on the long dimension

1. The vibracores are transferred to The Contractor in 5-foot, full-round sections, with rubber “shoes” on each end. Typically they are labeled Core xxx, with core depth marked on each end to show top and bottom ends of the core sections (for example, “0’ TOP..... CORE xxx.....5’ BOT”, see photo below) . The cores sections are stored vertically, top end up, to limit deformation of core contents. The rubber shoes were perforated immediately after drilling to allow water to drain from the core sections. Core sections are labeled by core number and drilled depth in feet.



Photo shows cores labeled and stored vertically on board the vibracore drilling vessel.

Typically the fourth of the 4 core sections (which is the deepest-drilled section of the vibracore) will be marked indicating the total depth of the core. Typically it is not a full 5-ft length, so the total depth is less than 20 (e.g. 15 – 17.8’). Alternatively, this last section may exceed 5 feet because the total depth was just over 20 feet. Use the same protocol described herein to prepare “short” and/or “long” core sections. **Note that the sawing jig must be able to hold a core section as long as 6 feet.**

2. As mentioned above, core sections are marked for core ID and section ID (depth in feet). Before cutting on the long dimension, wipe dirt and salt off the PVC tube and copy the core markings onto the core directly opposite the original markings, so that each long half has a core ID and section ID.
3. Place the core section in the jig, positioned such that the long cut will not cut the core ID information. Using a circular saw with a high quality 7 ¼” 40-tooth carbide-tip blade (National American or equivalent), make a cut along the length of the core, with the blade cutting mainly the PVC tubing, with as little disruption to the core contents as possible. Operators and assistants must wear protection for eyes, ears, and lungs and follow all OSHA rules and regulations.



Photo shows proper placement of saw on jig and operator with required protective gear.

4. Make sure that the long cut completely cuts through the PVC tube along the entire length of the core section. If not, it should be re-done, usually by lowering the blade slightly. Check each cut before you re-position the core. Carefully lift the core out of the rack and turn a half round (180°) to prepare for the second long cut. Be careful not to twist one end of the core. The core at both ends should have the first cut now at the center point of the jig, underneath (aka, at 6 o'clock). Both ends should be at the center bottom. If one or both ends are not in position, lift the core section and place it in again. If there is a twist in the core when it is cut, it is hard to move to the processing table without losing sediment.
5. The two cuts will include cutting through the red rubber shoe. Please note that, particularly on the second long cut, the PVC tube is apt to sag in the rack. This often requires re-setting the saw blade to cut about 2-3 mm deeper in order to cut through the PVC in the middle "sagging" section.
6. To minimize contamination of the core by the PVC tubing sawdust, wipe away the sawdust from the cut core in the rack.
7. With extreme care, lift one end of the now-cut core section in a steady smooth movement, high enough so that the other worker at the opposite end of the section can reach into the rack to get a good hold on the core. In the second half of this movement, when both workers have a good grip on the core section, turn it a quarter round (90°) such that the two cuts are on the side (aka, at 3 o'clock and at 9 o'clock) so that the contents do not spill out. Once you have the cuts on the side, transfer the core section to a clean 5- or 6-foot table.
8. At the table, clean the core section again with a rag. Have ready a utility knife with a sharp blade and a wire (cable) saw. Using personal safety awareness (your stabilizing grip on the core section should be at least 6 inches away from the rubber shoe), use the utility blade to finish the cut on the rubber shoe between the two saw blade cuts. Do this on both ends.
9. While one person holds the core steady with the long cuts on the sides, the other person carefully draws the plastic pipe cable saw down the length of the core, starting by feeding the cable saw through the cut made with the utility knife. Observe caution about two things:

- a. If you hit resistance, do not strain. It will disrupt the core contents. Take a second wire saw; lead it in from the opposite end, and where they meet, leave them there in the core before you open it. It could be lodged on a large cobble, or a shell, and they are best preserved and the core less disturbed by this accommodation.
 - b. When drawing the cable saw through the core, ease up on the force as you get to the end of the core, or else you will spray yourself and the work table with sediment and lose material out of the core.
10. Once the cable saw has been drawn through the entire length of the core section, the core section is effectively split. With both workers holding the ends of the core section (including the rubber shoes, now also split), steadily turn the core section a quarter round (90°) so that long cut is now vertical. With a quick and steady motion, let the two halves fall open alongside each other. A quick steady motion will help limit the amount of sediment that falls out of the core section halves during this opening.
11. Examine the core halves for general contents. Evaluate which half has the better intact sediments. If there is a whole section that has fallen out of a core half, please replace that sediment as close as reasonably possible to its correct depth position in the core section. Due to the “fall-out”, the disrupted section should be designated as the archive section.
12. After choosing the better half to be processed, set aside the archive half and use the proper ID and depth label for the archive section. NJG&WS will provide a standard label form. You will be wrapping both the sampled and archive sections for storage when the processing is completed.
13. Using a small and thin metal (ceramics or laboratory) spatula, remove excess sediment from the “better half”. The aim is to gently remove sediment off to the sides of the core, not smeared down the core length, such that the sediment and lithologies down-core are revealed and not mixed with each other. Work around large shells and cobbles. Take care not to “pluck” out the contents by smoothing too forcefully. Take care not to burnish clay layers (they become shiny). With clay layers, it is best to leave them mostly “as is”. Try to remove traces of the wire saw cut if possible, but do not if the sediment becomes rough or shiny.
14. The processing rack must be at least 12 feet in length. Using a dust broom and pan and/or a sponge, clean the processing rack of any dust or sediment. With much care, transfer the “better half” to the clean processing rack. Do not push the core into the head of the rack with force, which creates impact marks in the sediment. Facing the processing rack, the top of the core will be to the left.
15. With the first core half in position, locate the next core section down-core, and repeat the steps above to this point. The result will be two core section halves positioned in the processing rack.
16. Proceed to Protocol #2: Core section labeling for photos, description, and sampling

Supplement Number Two (2)

Protocol #2: Core section labeling for photos, lithologic description, and sampling

General concept - This protocol starts from the point at which the first two core sections have been opened with the circular saw, transferred to the table, fully cut with the wire saw, fully opened, with sample and archive halves selected, and the sample halves positioned in the processing rack. Note: the sampled half is the one in better condition, showing better contacts between units, etc.

The labeling pattern is designed to accomplish two things: 1) it provides a “down-core” labeling pattern with enough frequency for at-a-glance lithologic review; 2) it uses the “R” in the word “CORE” as a centering tool for stitching photos that uniformly capture 35 cm of core length and are advanced 25 cm down-core for each photo. The **panorama** tool in photo editing software joins the sequence of images from one core section into one long panoramic image (approximately 7 – 10 images per core section). The Contractor will re-create a panoramic image of the core section in its entirety. (For reference, see core section panorama shots of Core 71 in the Addendum.

1. **Placing the tape measures.** Position two tape measures on the “shelf edge” of the rack, one scaled in **feet (tenths)**, the other **metric**, such that core ID and core depth labels can be positioned between them. The flat surface of the core half should be flush with the “shelf edge” of the rack. See photo below.



2. When positioning the top two core sections, align the 0.0 meters and 0.0 feet measures with the beginning of the core (the outside or top of the red rubber shoe. Use thumbtacks to secure the tapes, so that they do not detract from the image. Copies of the composite photos (4 sections) of Core 71 have been included to show tape measure placement (see attached files).

When positioning the lower two core sections (last 2 of 4 total core sections, including the bottom of the core), check the lithologic log you are preparing for the exact depth of the end of the previous section. Typically, this is ~3.1 m depth. Please note the depth, and start your tape measures at that depth at the top end of the rack for the second set of core sections.

Secure the tape measures with duct tape approximately one foot beyond the end of the lower core section (beyond the view range of the last digital image)

3. **Depth labels** Place these labels every 0.2 meters (20 cm) perpendicular to the tape measures, centered between them, skipping a label at each full-meter depth. Place the labels at 0.0, 0.2, 0.4, 0.6, 0.8, 1.2, 1.4, 1.6, 1.8, 2.2, 2.4 m, etc. Do not place a depth label at the 1.0, 2.0, 3.0 m (etc) depth. There will be a **core ID label** placed at all the full meter depths.

4. **Core ID Labels** Place these labels at 0.25-m (25-cm) intervals, starting at 0.25 m. The sequence is 0.25, 0.5, 0.75, 1.0, 1.25, 1.5, 1.75, 2.0 m, etc. The label will read, “**CORE XXX**”. Align the “**R**” in the word “**CORE**” with the tick mark on the meter tape that corresponds to the 0.25-m interval. This 0.25-m interval is based on the focal length that works the best for taking a sequence of 7-8 individual shots. This number of shots will “capture” the entire 5-ft (1.5-m) core section. Shooting at wider intervals creates non-uniform photo sizes which in turn degrades the panorama function for the entire core section. Refer to the Core 71 composite photos in the Addendum regarding the placement of the depth labels and the core labels. **This step is key to creating quality panoramic images and a useful archive of individual shots. Any questions about this step should be directed to NJG&WS.**

5. **Aligning the labels on the rack:** This step is KEY to having high-quality photographs of the core. The entire section will be labeled as follows (depth labels interspersed with Core ID labels, as indicated:

- 0.0m
- 0.2m
- 0.25 core ID label with the “R” of “CORE” centered at 0.25m, parallel to core section
- 0.4m
- 0.5 core ID label with the “R” of “CORE” centered at 0.5m, parallel to core section
- 0.6m
- 0.75 core ID label with the “R” of “CORE” centered at 0.75m, parallel to core section
- 0.8m
- 1.0 core ID label with the “R” of “CORE” centered at 1.0m, parallel to core section
- 1.2m
- 1.25 core ID label with the “R” of “CORE” centered at 1.25m, parallel to core section
- 1.4m
- 1.5 core ID label with the “R” of “CORE” centered at 1.5m, parallel to core section
- 1.6m
- 1.75 core ID label with the “R” of “CORE” centered at 1.75m, parallel to core section
- 1.8m
- 2.0 core ID label with the “R” of “CORE” centered at 2.0m, parallel to core section
- 2.2m
- 2.25 core ID label with the “R” of “CORE” centered at 2.25m, parallel to core section
- 2.4m
- 2.5 core ID label with the “R” of “CORE” centered at 2.5m, parallel to core section
- 2.6m
- 2.75 core ID label with the “R” of “CORE” centered at 2.75m, parallel to core section
- 2.8m
- 3.0 core ID label with the “R” of “CORE” centered at 3.0m, parallel to core section etc.



Follow this same pattern up to about 6.2m, depending on the total depth of the core. The total depth of the core can be determined from looking at the last two core sections, or looking on the drilling record for the total recovery of the core.

NOTE: As stated above, when working with the upper two core sections, it is important to note the end depth of the second core section in the rack. Typically it is over 3 meters, e.g., 3.15m. When positioning the labels for the lower set of core sections (processing the lower half of the vibracore), align the tape measures at the left hand end of the rack to run from the end depth of the second core section (e.g. 3.15m). This is very important for accurate measurement and so that the panoramic core photos make sense.

6. Copies of **Core ID labels** and **core depth labels** are included in the Addendum.
7. Proceed to Protocol #3: Camera positioning

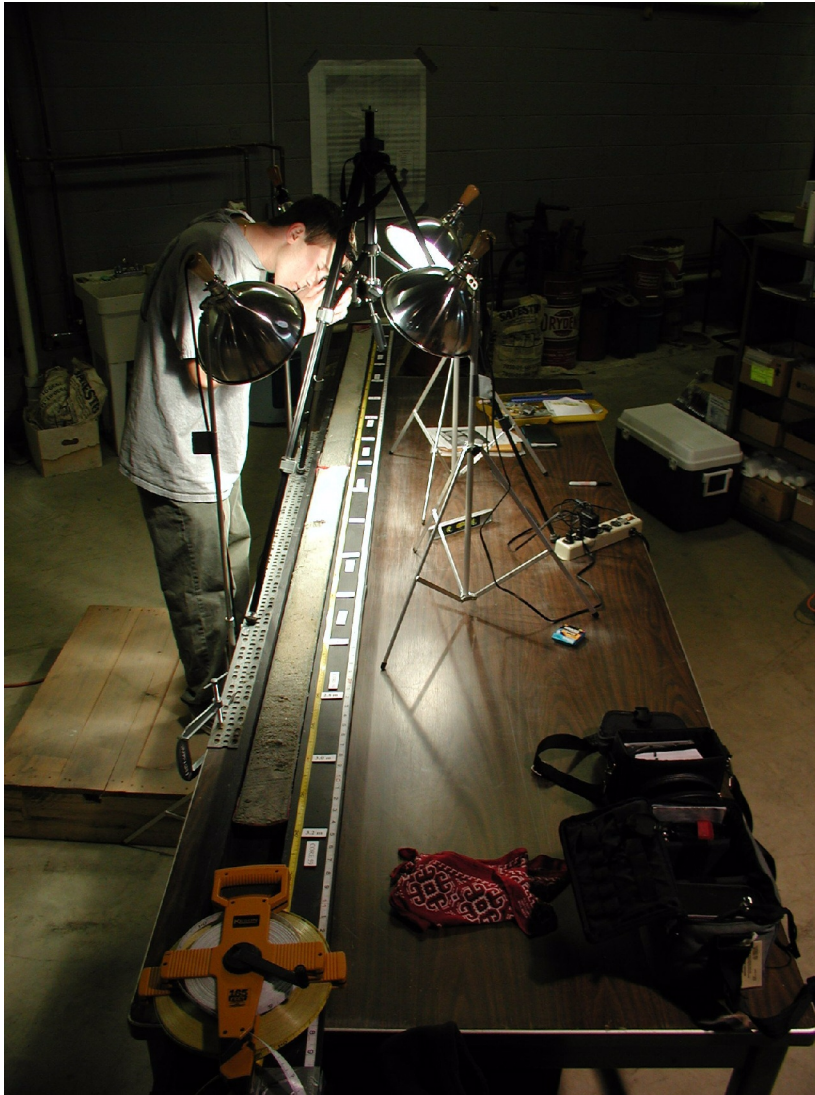
Supplement Number Three (3)

Protocol #3: Photographing core sections

Main Concepts

Digital panoramic images of each 5-ft core section and the component individual photos are one of the 4 deliverables in this contract. Photograph each 5-ft core section in a series of images, with a field of view in each image of 35 cm of core section along the meter measuring tape. Each 35-cm digital image of core section must be of sufficiently high resolution that it is at least 12 megapixels. To provide sufficient “stitching” area for merging photos, move the core 25 cm for each successive image. We recommend moving the core, not the camera, so that the camera does not need to be re-leveled after each shot. If not re-leveled, the stitching will fail. We strongly recommend using a tripod over the core rack with an arm or seating that holds the camera with the lens is facing down. You will need to be able to adjust the level of the camera in two directions where it attaches to the tripod. It is not necessary to use studio lamps with digital cameras. Light quality and quantity must be constant across all the images. Do not use flash, due to the reflective nature of the sediment. Use ambient light, not studio lights (ignore studio light set-up shown in photo below). It is imperative to use a remote tool to take the shot. Pushing the “shutter release” button on the camera creates camera movement and loss of level positioning.

The “R” in CORE on the horizontal core ID labels is positioned at 25-cm increments as a guide. One core section typically includes 6-8 individual shots. With photo merging software, create a panoramic image which seamlessly captures the entire core section.



Required Equipment

1. Digital SLR camera, minimum of 12 megapixels, with an 18 – 50 mm lens and a panorama shooting function.
2. Camera tripod with capability to mount the camera with lens level and facing straight down to the core rack, with enough focal distance so that the image size is 35 cm along the length of the core, and such that both tape measures and both the core-ID and core-depth labels are visible in the frame.
3. Remote control shooting tool or cable for remote shooting.
4. Room with constant/controllable light source to establish uniform light quality and quantity in core photos

Photographing protocol

1. Check that the core is level in the core rack, that is, that the flat surface you have cut and cleaned is level with the core rack and the table.
2. Check that the camera is positioned such that the image size is 35 cm, and so that the letter “R” in consecutive CORE XXX labels fits in the image stitching box on each end of the image. The distance between the “R”s is 25 cm, and the total dimension of the image with the stitching boxes is about 35cm.

3. After sizing the image correctly, check that the camera is level using a level in both directions of the image. This will properly align the images for stitching. If the camera is not level, and if the camera is not orthogonal (squared) with the core in the rack, the images will not stitch properly, and they will have to be photographed again.
4. Take the series of photos for each core section in the rack, shooting down-core. For each consecutive photo, the “R” that was in the right hand stitching box is moved to the left hand stitching box. When you are shooting the end of the core section, include the red “shoe” in the image to show the end of the core section. Finish the first panorama group by starting the second panorama group when you shoot the second core section in the rack. Continue to “stitch” on the “R”s. That will take you across the red shoe boundary without having to shoot an interval of core twice. There will be a total of 13 to 16 images. When finished photographing the two core sections, transfer the images to the computer and open the photo merging software.
5. When working in the photo merging software, stitch together all the photos for the first core section, including the image that has the red “shoe”, and save the panoramic image with the following naming convention:

The first core section pan photo would be saved with the file names:

XXX0005.jpg

XXX0005.tif

representing a .jpg and .tif file for the core section from 0 – 5 feet.

The second core section pan photo would be saved with the file names:

XXX0510.jpg

XXX0510.tif

representing a .jpg and .tif file for the core section from 5 – 10 feet.

Proceed with the same naming convention to the end of the core:

XXX1015.jpg

XXX1015.tif

and

XXX1520.jpg

XXX1520.tif

It is not uncommon for the total length of the vibracore to be less than 20 feet, and the actual depth will be marked on the deepest core section, as described in Protocol #1. Still use the XXX1520 name for the deepest core section pan photos.

For each core section, you may need to use the last image from the first pan for the first image in the second pan, etc. if the last image in a pan group shows more core beyond the “shoe” junction. You will need to check the overlap in consecutive images to make this determination.

Save all the merged image files in a folder named for the Core, e.g. Core XXX

Create a sub-folder entitled “Individual Shots” in each core photo folder. **Save** uncompressed .jpg and .tif files of all the individual shots and place them in that sub-folder. Information regarding the camera make and exposure data should be recorded and accessible at the **properties** information tab for each photo .jpg and photo .tiff file. Copies of the panoramic photos for NJG&WS Core 179 have been included in the Addendum as an example of the quality of the photos and how to save the files.

6. QAQC – Upon completing the photographing of the first two core sections (first half of first entire vibracore), submit the first group of photos, both merged and individual shots, to NJGWS personnel for a Quality Assurance review. If these images are approved by NJGWS personnel and represent accurately the quality of the work that will be done subsequently, the contractor may proceed with the photographing. NJGWS reserves the right to conduct spot checks of photo quality for the duration of the contract. Poor quality photos will be returned for re-shooting.
7. To prevent disruption, desiccation, and other damage that would negatively impact photo quality, core sections must be photographed within 72 hours of being opened. If the cleaned surface has become dry, spray lightly with water before photographing. Avoid moistening the paper labels on the core rack.
8. Build the digital panoramic shot for each core section while the core section is still open and unsampled, in case there are problems with the individual images or the pan shot. The image sequence may need to be re-photographed. Once there are satisfactory panoramic shots of the two core sections, the core ID and core depth labels can be removed. Core depth labels should be saved for the next vibracore. Core ID labels will not be needed again, once the entire vibracore has been photographed to satisfaction.
9. Keep the two measuring tapes in place for accurate depth and thickness measurements during the lithologic description.
10. Proceed to Protocol #4: Lithologic description of the core

Supplement Number Four (4)

Protocol #4: Lithologic description of the core

Main Concept – Completed lithological logs of all the vibracores, prepared on NJGWS lithologic log sheets, with proper sediment and feature symbols, is one of the 4 deliverables of this contract. After opening two core sections, cleaning the top surface, placing in the rack, and taking the photographs.

1. You will have two sections of core (typically). Look first at the entire length of core in the rack to get a sense of the lithologies and lithologic changes down-core.
2. On a general scale, note the breaks in lithologies, or where you would distinguish different describable units. You may later change these calls based on closer examination; this is intended as a guide for your description.
3. For the unit starting at the top of the uppermost core section, take a small sample with a laboratory spatula and look at it with the grain size chart and a hand lens. Look at the following features in this hand sample:
 - a. grain size (use the hand chart and train your eye to the relative sizes)
 - b. mineral content –
 - mostly quartz?
 - % other minerals? (or rock fragments)
 - % opaque minerals? (% glauconite, a major opaque in our samples)
 - any other mineral features that you notice
 - c. roundness of grains (angular – rounded)
 - d. color – match to a color in the Munsel Soil Color Chart
 - e. gravel content (and whether the gravel is dispersed or concentrated)
 - f. if silt/clay, determine which:
 1. clay will ball or ribbon between your fingers, silt will not
 2. taste test: a gritty texture indicates some silt content
 - g. if clay, look for mica, organics.

Before recording this information on the lithologic log sheets, take several other hand samples from the unit and compare to what you noted in the first hand sample. If features a, b, c, and d are similar in your other hand samples, then you can record that data. On the other hand, if they are slightly different, incorporate their qualities into your description. If they are very different, designate a separate unit. NJGWS will provide paper log sheets for recording lithology. Indicate the total thickness of the unit by counting the proper depth on the log sheet and drawing a line with a ruler across the sheet at that depth to indicate the lithologic boundary. Also record the depth of the contact on the lithology log, near the scale margin. A sediment symbol legend is included at the end of this protocol and in the Addendum.

4. A note about recording the color using the Munsel soil color chart: Color is not diagnostic, because it can be affected by secondary oxidation or moisture content. However, it can be helpful in understanding the history of the sediments. Also, over many cores, color characteristics of certain age sediments are significant.



Matching the core sediment color with a soil color panel from the Munsel Soil Color Chart

5. Evaluate shell material, specifically their **Size, concentration, and condition**. List by genera; include species if they are numerous and common. Identify shells by general occurrence in the sediment, not individually, unless the shell is large (> 2 inches diameter), unusual, or a very good specimen.
 - a. How big are they?
 - b. Are the shells whole or broken?
 - c. Are they articulated? (e.g. bivalves still together = died *in situ*).
 - d. Are they dispersed throughout a sand unit?
 - e. Are they clustered as a shell hash at the base or in a layer within a sand unit? (possible evidence of a storm event or sequence boundary).
 - f. Do they look fresh or oxidized? (the oxidized shells (brown stain) indicate a sub-aerial setting).
6. Identify or note other organic material:
 - a. wood or peat fragments – record depth in core (in hundredths of meters, e.g. x.xx m; extract for age date if possible)
 - b. root structures – typically vertical in the core, very small, only found in
 1. inter-bedded silts, sands, and clays (back bay/lagoon environment)
 - c. the very rare bone fragment, or shark's tooth
 - d. For any extracted organic material, please wrap gently in foil and place in a zip-closing plastic sample bag, listing Core number, depth of sample, date of sampling, possible identification of organic material.
7. Sedimentary structures: Though our cores are small in diameter, one can identify some structures including:
 - a. thin layers or laminae – if these repeat, they may indicate rhythmic bedding, cyclicity
these can appear arched up-core from distortion during coring
 - b. mix of gravel and clay
 - c. thin layers or “streaks” of heavy-mineral concentrations
 - d. burrows, often evident between units where material from upper unit infills the burrow into the lower unit; note whether horizontal or vertical and depth and extent of prominent burrows.
 - e. coarsening upward or fining upward within a unit (does the sand size

change within the unit?)

- f. iron-staining on the sands or clays (reddish brown to yellow)
 - g. clasts of clay in sand (probably ripped up from underlying unit)
 - h. sand laminae (hard to see in our cores, but can indicate cross bedding – sometimes the heavy-mineral layers can show this too)
 - i. nature of the contacts between units – gradual or sharp; clay on sand, sand on sand, gravel on clay, etc.
8. Note the depth of the bottom of the first two sections. You will need to use this depth as your starting depth for the tape measures and core depth labels when you load the last two core sections into the rack. Mark the depth of the end of the first two sections as EOS = X.XX. Refer to that for calibrating the depth of the next two sections.
 9. Note the depth of the end of the core by writing “EOC = X.XX m” at the end of the lithologic record.
 10. Each lithologic description page should be initialed and dated by the qualified, experienced geologist described in the Scope of Work Document. The initials indicate that person’s approval of and responsibility for the completed lithologic log.
 11. See lithologic symbols and lithologic log sheets in the Addendum.
 12. Keep the two measuring tapes in place for accurate measurement during the sampling for grain-size analysis.
 13. QAQC – Upon completing the lithologic logging of the first two core sections (first half of first entire vibracore), submit the log sheets for those core sections to NJG&WS personnel for a Quality Assurance review. If these lithologic log sheets are approved by NJG&WS personnel, and if they represent accurately the quality of the work that will be done subsequently, the contractor may proceed with the lithologic logging of the remainder of the cores. NJG&WS reserves the right to conduct periodic checks of lithologic log quality for the duration of the contract. Unsatisfactory log sheets will be returned and the contractor will have to re-log the core sections and produce a satisfactory log sheet.
 14. Proceed to Protocol #5: Sampling core sections for grain-size analysis

Supplement Number Five (5)

Protocol #5: Sampling core sections for grain-size analysis

Main Concept – Grain size samples (100-120 gm per sample) collected at 30-cm intervals for all the vibracores is one of the 4 deliverables of this contract. Grain size samples will be collected every 30 cm. At each 0.3 m increment, starting at 0.0 meters, make a mark and make another mark 5 cm farther down. Using the center of the core as the inner boundary, sample a quarter-round of core or “quarter-core” between 0.0 and 0.05 m, 0.3 and 0.35 m, 0.6 and 0.65 m, etc. See example from core section below.



Accordingly, the sample is collected from 0.0 – 0.05m, then from 0.3-0.35m, from 0.6-0.65m, etc. If the sample is located between core sections, collect from both sections over the 5-cm interval. If the deepest sample (end of the core) is within 5 cms of the next 30-cm interval, sample the 5-cm interval at the end of the core, indicating that the exact depth is different from the usual 30-cm interval and that it was the end of the core.

1. **Preparation** - Label bags with NJG&WS 2011, the core number, sample ID number based on depth in the core (e.g. XXX030 = core XXX sampled at the 0.30-0.35 interval), depth in the core, and date on which you are collecting the sample. Be sure that the label records a depth range of 0.05 m, not 0.5 m.

Example Bag Label

Project	NJG&WS 2011
Core	XXX
Sample #	XXX000
Depth	0.00 – 0.05m
Process date	month/day/year

Samples must be taken after photos and lithologic descriptions have been recorded, with measuring tapes still in place.

2. **Collection**

- A. Starting with the interval 0.00-0.05 m, remove half of the cut core (one quarter of the original cylindrical core). The sample should weigh between 100 and 120 grams.
- B. Place the sediment in a **6 x 9 inch, 2 mil** zip closing sample bag with a white label panel. Before sealing, remove as much air as possible from the bag.
- C. Sample 5-cm sections every 30 cm to the end of the core (0.00 – 0.05 m, 0.30- 0.35 m, 0.60-0.65 m, etc.). Reading down the columns, core sample numbers will be in this sequence, based on the depth of the sample in cms:

start
XXX000
XXX030
XXX060
XXX090
XXX120
XXX150
XXX180
XXX210
XXX240
XXX270
XXX300
XXX330
XXX360
XXX390
XXX420
XXX450
XXX480
XXX510
XXX540
XXX570
XXX600
XXX630
End

- D. For reference, the depth at which the grain size samples are collected is marked on the NJG&WS lithologic log sheets.
- E. Unconsolidated sandy material will slump in the core when sampled. Please extract the required amount by weight, staying within the 5-cm interval as much as possible.
3. **Sample inventory and custody** - Place grain size samples in a storage box, in depth order. As each full vibracore is completed, inventory the number of grain-size samples collected from the vibracore on the NJG&Ws digital spreadsheet, indicating the total depth of the core and the number of samples collected. Typically, a 20-foot-deep core will have 20 grain-size samples. As noted above, these samples are one of the 4 deliverables in this contract.
4. **QAQC** – After collecting grain size samples from the first two core sections (first half of first entire core), submit the samples and the spreadsheet to NJG&WS personnel for a Quality Assurance review. If these are approved by NJG&WS personnel, and if they represent accurately the quality of the work that will be done subsequently, the contractor may proceed with the sampling of the remainder of the cores. NJGWS reserves the right to conduct periodic checks of the sampling for the duration of the contract. If any subsequent sampling and sample inventory are not up to the standards outlined in the protocol, the contractor will have to re-sample those core sections according to the protocol.
5. Remove meter and feet tape measures after sampling for the two core sections is completed.
6. Proceed to Protocol #6: Wrapping core sections after photographing, logging, and sampling

Supplement Number Six (6)

Protocol #6: Wrapping core sections and returning to NJG&WS

General concept – The processed, wrapped and labeled core sections of all the vibracores, plus an inventory of all the sections, both sampled and archived, is one of the 4 deliverables of this contract. Core sections will be wrapped for storage in sturdy, **2-mil** plastic sheeting. Each core section requires a sheet that measures the length of the core section plus about 12 inches (for a 6-inch margin for secure closure at both ends), and the width of about 1 ½ wraps around the half-cylinder, typically about 18 inches.

1. Position the core section in the top half (in the width dimension) of the plastic sheet.
2. Take the lower half (of the width dimension) and wrap it over the flat side of the half cylinder and tuck under the curve of the half-cylinder, all the way along the section.
3. Pull the top half over the lower half all along the core section. Tuck the CORE XXX section ID label under the top flap of the plastic sheeting, such that it can be read easily on the flat surface through the plastic sheeting. Standard section ID labels are included in the Addendum.
4. Secure the label by wrapping duct tape around the half-cylinder on both sides of the label.
5. Secure the plastic sheeting at the ends of the core section by tucking the excess sheeting under the half-cylinder and wrapping tightly with duct tape at each end. See figure below.



How to wrap and label core sections. Note core ID label placed under plastic edge at center of core section, plastic secured with duct tape in four places, ends of plastic secured with the duct tape several inches from the end of the core. The plastic sheeting is labeled with the core number at both ends of the core section.

6. Store core sections horizontally on a pallet to prevent disruption of core contents. Core halves must be stacked cut side up, grouped by two (2) for each section. Do not stack core sections halves more than eight (8) high on the pallet. Group together all the core sections for each vibracore, both sampled and archived halves, for ease of inventory at the end of the work.
7. QAQC – After completion of wrapping and labeling the first two core sections (first half of first entire core), NJG&WS personnel will evaluate the wrapping method as part of the initial Quality Assurance review. If approved, and if the core wrapping and labeling accurately represent the quality of the work that will be done subsequently, the contractor may proceed with wrapping and labeling the remainder of the cores. NJG&WS reserves the right to conduct spot checks of the wrapping for the duration of the contract. If any subsequent core wrapping is not up to the standards outlined in the protocol, the contractor will re-wrap and label those core sections halves according to the protocol.
8. The Contractor will transport the core section halves to the NJG&WS facility in Trenton, NJ. grouped by vibracore and arranged horizontally on palettes. The Contractor will stack no more than 6 section halves on top of each other to avoid slippage and damage to core halves in transit.

The Contractor will return the core sections from the 29 vibracores in 3 increments of 10, 10 and 9 vibracores each, coinciding with the completion of the deliverables for each group of 10 (or 9) vibracores and partial payment for that portion of the work completed, as outlined in the Scope of Work.

At the time of transfer of custody of the core sections, The Contractor and NJG&WS will check the delivery against the original core section inventory to verify that all the listed core sections in the group or 10 vibracores have been returned in good order.

