

PA/SDMT1 contract

THE PORT AUTHORITY OF NEW YORK & NEW JERSEY

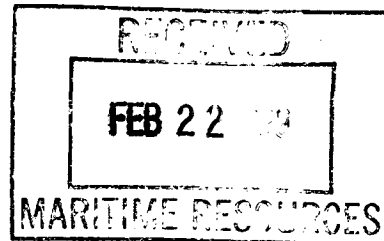
MEMORANDUM

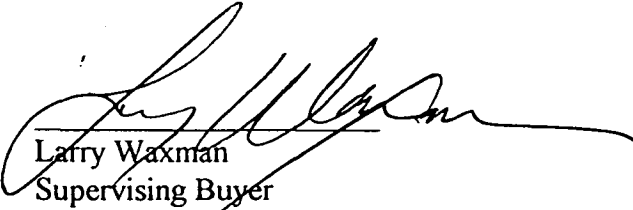
TO: Dan Bergstein  
FROM: Larry Waxman  
DATE: July 6, 1998  
SUBJECT: P.O. 24680 CONSULANT SERVICES WITH STEVENS INSTITUTE  
  
COPY TO: SEE BELOW

Transmitted herewith is original contract as described above with Stevens Institute of Technology in the net amount of \$117,000.00.

Conformed copies of this contract are being distributed as follows:

T. D'Alessio  
J. Alexander  
Q.D. Lee  
G. Sepsie  
P. Podell  
J. Buckley  
A. Trotto  
L. Borrone  
V.C. Kelly  
E. Knoesel  
T. Wakeman  
PSD Files



  
Larry Waxman  
Supervising Buyer  
Purchasing Division

/nr



June 18, 1998

Mr. Dimitris Dermatas, Ph.D  
Director, W.M. Keck Geoenvironmental Engineering Lab  
Dredged Material Sediment Technology Institute  
Stevens Institute of Technology  
Hoboken, New Jersey 07030

**SUBJECT: EXPERT PROFESSIONAL SERVICES FOR THE USE OF DREDGED  
MATERIAL IN TRANSPORTATION RELATED PROJECTS**

Dear Dr. Dermatas:

1. The Port Authority of New York and New Jersey (hereinafter referred to as the "Authority") hereby offers to retain Stevens Institute of Technology through the Sediment & Dredged Materials Technology Institute [SDMTI] (hereinafter referred to as "the Consultant" or "you") to provide expert professional services as more fully set forth in the Scope of Work in Attachment A, which is attached hereto and made a part hereof. All references herein to "Attachment A" or the "Scope of Work" shall mean the Scope of Work revised as of July 18, 1997 and amended June 10, 1998.

As used herein "Director" shall mean the Director, Port Commerce Department of the Authority acting either personally or through their duly authorized representatives acting within the scope of the particular authority vested in them unless specifically stated to mean acting personally.

For the purpose of administering this Agreement, I have designated Thomas H. Wakeman, Program Manager, Port Commerce Department, to act as my duly authorized representative. The Project Manager for this undertaking is Angelo R. Trotto, P.E., Supervising Engineer, Port Commerce Department (212) 435-5059.

2. Your services hereunder shall consist of those specified in Attachment A.

3. Your services shall be performed as expeditiously as possible and at the time or times required by the Director, and shall, in any case, be completed in accordance with the schedule specified in Attachment A. Time is of the essence in the performance of all your services under this Agreement.

4. The Consultant shall meet and consult with Authority staff as requested by the Director in connection with the services to be performed herein. Any drawings and other items to be submitted or prepared by the Consultant hereunder shall be subject to the review of the Director. The Director may

disapprove, if in his sole opinion the said items are not in accordance with the requirements of this Agreement, or are unsuited in any way for the purpose for which they are intended. If any of the said items or any portion thereof are so disapproved, the Consultant shall forthwith revise them until they meet the approval of the Director, but the Consultant shall not be compensated under any provision of this Agreement for performance of such revisions. No approval or disapproval or omission to approve or disapprove, however, shall relieve the Consultant of his responsibility under this Agreement to furnish in accordance with the schedule herein, a complete drawing or drawings and corrections and changes therein which depict the contemplated construction.

5. As full compensation for all your services and obligations in connection with this Agreement, the Authority will pay you the amount of \$117,000 (herein called the "Lump Sum") in accordance with the following:

Upon completion of the tasks and submission of the deliverables listed for weeks 0 through 6 as set forth in Table 1 of "Use of Dredged Material as Fill in Transportation Related Projects" dated June 10, 1998, (hereinafter the amended Scope of Work entitled "Table 1") twenty-five percent (25%) of the Lump Sum.

Upon completion of the tasks and submission of the deliverables listed for weeks 7 through 12 as set forth in Table 1, twenty-five percent (25%) of the Lump Sum.

Upon completion of the tasks and submission of the deliverables listed for weeks 13 through 18 as set forth in Table 1, twenty-five percent (25%) of the Lump Sum.

Upon completion and submission of the final report on the project as specified in Attachment A, twenty-five percent (25%) of the Lump Sum.

6. The Consultant assumes the following distinct and several risks, whether they arise from the acts or omissions (whether negligent or not) of the Consultant, of the Authority or of third persons or from any other cause, and whether such risks are within or beyond the control of the Consultant excepting only risks which arise solely from affirmative acts done by the Authority subsequent to the execution of this Agreement with actual and willful intent to cause the loss, damage and injuries described in subparagraphs A through D below:

A. The risk of loss or damage to Authority property arising out of or alleged to arise out of or in connection with the performance of services hereunder;

B. The risk of loss or damage to any property of the Consultant arising out of or alleged to arise out of or in connection with the performance of services hereunder;

C. The risk of claims, arising out of or alleged to arise out of or in connection with the performance of services hereunder, whether made against the Consultant or the Authority, for loss



or damage to any property of the Consultant's agents, employees, subcontractors, subconsultants, materialmen and others performing services hereunder;

D. The risk of claims, just or unjust, by third persons made against the Consultant or the Authority on account of injuries (including wrongful death), loss or damage of any kind whatsoever arising or alleged to arise out of or in connection with the performance of services hereunder (whether or not actually caused by or resulting from the performance of the services hereunder) including claims against the Consultant or the Authority for the payment of workers' compensation, whether such claims are made and whether such injuries, damage and loss are sustained at any time both before and after the completion of services hereunder.

The Consultant shall indemnify the Authority against all claims described in subparagraphs A through D above and for all expense incurred by it in the defense, settlement or satisfaction thereof, including expenses of attorneys. If so directed, the Consultant shall defend against any claim described in subparagraphs B, C and D above, in which event he shall not without obtaining express advance permission from the General Counsel of the Authority raise any defense involving in any way jurisdiction of the tribunal, immunity of the Authority, governmental nature of the Authority or the provisions of any statutes respecting suits against the Authority, such defense to be at the Consultant's cost.

The provisions of this clause shall also be for the benefit of the Commissioners, officers, agents and employees of the Authority, so that they shall have all the rights which they would have under this clause if they were named at each place above at which the Authority is named, including a direct right of action against the Consultant to enforce the foregoing indemnity, except, however, that the Authority may at any time in its sole discretion and without liability on its part cancel the benefit conferred on any of them by this clause, whether or not the occasion for invoking such benefit has already arisen at the time of such cancellation.

Neither the completion of services hereunder nor the making of payment (final or otherwise) shall release the Consultant from his obligations under this clause. Moreover, neither the enumeration in this clause nor the enumeration elsewhere in this Agreement of particular risks assumed by the Consultant or of particular claims for which he is responsible shall be deemed (a) to limit the effect of the provisions of this clause or of any other clause of this Agreement relating to such risks or claims, (b) to imply that he assumes or is responsible for risks or claims only of the type enumerated in this clause or in any other clause of this Agreement, or (c) to limit the risks which he would assume or the claims for which he would be responsible in the absence of such enumerations.

This paragraph shall not limit the responsibilities the Consultant would have in the absence of this paragraph. No third party rights are created by the Agreement, except to the extent that the Agreement specifically provides otherwise by use of the words "benefit" or "direct right of action".



E. The Consultant shall obtain, at its own expense, and maintain for the duration of the Agreement, insurance coverage as specified in Attachment B. The Consultant shall provide evidence of said insurance coverage prior to commencement of the work by submitting a certificate of insurance to the Project Manager as indicated in Attachment B.

7. Upon satisfactory completion of your services hereunder, you shall render a bill for services performed accompanied by such information as required, to the Project Manager. Each invoice shall bear your taxpayer identification number. Upon receipt of the foregoing, the Director will certify to the Authority the amount of compensation earned by you. The Authority shall, within fifteen days after receipt of such certification by the Director, pay to you by check the sum certified.

8. The Authority may at any time for cause terminate this Agreement as to any services not yet rendered, and may terminate this Agreement without cause upon three (3) days notice to you. You shall have no right of termination as to any services under this Agreement without just cause. Termination by either party shall be by certified letter addressed to the other at its address hereinbefore set forth. Should this Agreement be terminated by either party as above provided, you shall receive no compensation for any services not yet performed, but if termination is without fault on your part, the Authority shall pay you as the full compensation to which you shall be entitled in connection with this Agreement for the services satisfactorily performed through the date of termination, an amount bearing the same proportion to the Lump Sum as the work satisfactorily performed bears to the total work to be performed.

9. You shall not issue or permit to be issued any press release, advertisement, or literature of any kind which refers to the Authority or the services performed in connection with this Agreement, unless you first obtain the written approval of the Director. Such approval may be withheld if for any reason the Director believes that the publication of such information would be harmful to the public interest or is in any way undesirable.

10. Under no circumstances shall you or your subconsultant communicate in any way with any contractor, department, board, agency, commission or other organization or any person whether governmental or private in connection with the services to be performed hereunder except upon prior written approval and instructions of the Director, provided, however that data from manufacturers and suppliers of material shall be obtained by you when you find such data necessary unless otherwise instructed by the Director.

11. Any services performed for the benefit of the Authority at any time by you or on your behalf, even though in addition to those described herein, even if expressly and duly authorized by the Authority, shall be deemed to be rendered under and subject to this Agreement (unless referable to another express written, duly executed agreement by the same parties), whether such additional services are performed prior to, during or subsequent to the services described herein, and no rights or obligations shall arise out of such additional services.

12. No certificate, payment (final or otherwise), acceptance of any work nor any other act or omission of the Authority or the Director shall operate to release you from any obligations under or upon this



Agreement, or to estop the Authority from showing at any time that such certificate, payment, acceptance, act or omission was incorrect or to preclude the Authority from recovering any money paid in excess of that lawfully due, whether under mistake of law or fact or to prevent the recovery of any damages sustained by the Authority.

13. All drawings prepared by you, and other papers of any type whatsoever, whether in the form of writing, figures or delineations, computer disks or tapes, which are prepared or compiled in connection with this Agreement, shall become the property of the Authority, and the Authority shall have the right to use or permit the use of them and any ideas or methods represented by them for any purpose and at any time without other compensation than that specifically provided herein. The Consultant hereby warrants and represents that the Authority will have at all time the ownership and rights provided for in the immediately preceding sentence free and clear of all claims of third persons whether presently existing or arising in the future and whether presently known to either of the parties of this Agreement or not. This Agreement shall not be construed, however, to require the Consultant to obtain for the Authority the right to use any idea, design, method, material, equipment or other matter which is the subject of a valid patent, unless such patent be owned by the Consultant or one of his employees, or his subconsultant or the subconsultant's employees, in which case such right shall be obtained without additional compensation. Whether or not your Proposal is accepted by the Authority, it is agreed that all information of any nature whatsoever which is in any way connected with the services performed in connection with this Agreement, regardless of the form of communication, which has been or may be given by you or on your behalf, whether prior or subsequent to the execution of this Agreement, to the Authority, its Commissioners, officers, agents or employees, is not given in confidence and may be used or disclosed by or on behalf of the Authority without liability of any kind, except as may arise under valid existing or pending patents, if any.

14. If research or development is furnished in connection with the performance of this Agreement and if in the course of such research or development patentable subject matter is produced by the Consultant, his officers, agents, employees, or subconsultants, the Authority shall have, without cost or expense to it, an irrevocable, non-exclusive royalty-free license to make, have made, and use, either itself or by anyone on its behalf, such subject matter in connection with any activity now or hereafter engaged in or permitted by the Authority. Promptly upon request by the Authority, the Consultant shall furnish or obtain from the appropriate person a form of license satisfactory to the Authority, but it is expressly understood and agreed that, as between the Authority and the Consultant the license herein provided for shall nevertheless arise for the benefit of the Authority immediately upon the production of said subject matter, and shall not await formal exemplification in a written license agreement as provided for above. Such license agreement may be transferred by the Authority to its successors, immediate or otherwise, in the operation or ownership of any real or personal property now or hereafter owned or operated by the Authority but such license shall not be otherwise transferable.

15. You shall promptly and fully inform the Director in writing of any patents or patent disputes, whether existing or potential, of which you have knowledge, relating to any idea, design, method,

material, equipment or other matter related to the subject matter of this Agreement or coming to your attention in connection with this Agreement.

16. This Agreement being based upon your special qualifications for the services herein contemplated, any assignment, subletting or other transfer of this Agreement or any part hereof or of any monies due or to become due hereunder without the express consent in writing of the Authority shall be void and of no effect as to the Authority, provided, however, that you may sublet services to subconsultants with the express consent in writing of the Director. All persons to whom you sublet services, however, shall be deemed to be your agents and no subletting or approval thereof shall be deemed to release you from your obligations under this Agreement or to impose any obligation on the Authority to such subconsultant or give the subconsultant any rights against the Authority.

17. The Authority has a long-standing practice of encouraging Minority Business Enterprises (MBEs) and Women Business Enterprises (WBEs) to seek business opportunities with it, either directly or as subconsultants or subcontractors. "Minority-owned business" or "MBE" means a business entity which is at least fifty-one percent (51%) owned by one or more members of one or more minority groups, or, in the case of a publicly held corporation, at least fifty-one percent (51%) of the stock of which is owned by one or more members of one or more minority groups; and whose management and daily business operations are controlled by one or more such individuals who are citizens or permanent resident aliens. "Women-owned business" or "WBE" means a business which is at least fifty-one (51%) percent owned by one or more women, or, in the case of a publicly held corporation, fifty-one percent (51%) of the stock of which is owned by one or more women; and whose management and daily business operations are controlled by one or more women who are citizens or permanent resident aliens.

"Minority group" means any of the following racial or ethnic groups:

- A. Black persons having origins in any of the Black African racial groups not of Hispanic origin;
- B. Hispanic persons of Puerto Rican, Mexican, Dominican, Cuban, Central or South American culture or origin, regardless of race;
- C. Asian and Pacific Islander persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent or the Pacific Islands;
- D. American Indian or Alaskan Native persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification.

The Director has set a goal of 12 percent participation by qualified and certified MBEs and 5 percent to qualified and certified WBEs on consultant projects. In order to facilitate the meeting of this goal, the Consultant shall use every good faith effort to utilize subconsultants who are certified MBEs or WBEs to the maximum extent feasible.



The Authority has a list of certified MBE/WBE service firms which is available to you at your request. The Consultant will be required to submit to the Authority's Office of Business and Job Opportunity for certification the names of MBE/WBE firms he proposes to use who are not on the list of certified MBE/WBE firms. To be "certified", a firm must be certified by the Authority's Office of Business and Job Opportunity.

18. CERTIFICATION OF NO INVESTIGATION (CRIMINAL OR CIVIL ANTI-TRUST), INDICTMENT, CONVICTION, DEBARMENT, SUSPENSION, DISQUALIFICATION AND DISCLOSURE OF OTHER INFORMATION

By signing this Agreement, the Consultant and each person signing on behalf of the Consultant certifies, and in the case of a joint proposal each party thereto certifies as to its own organization, that the Consultant and each parent and/or affiliate of the Consultant has not:

- A. been indicted or convicted in any jurisdiction;
- B. been suspended, debarred, found not responsible or otherwise disqualified from entering into any agreement with any governmental agency or been denied a government agreement for failure to meet standards related to the integrity of the Consultant;
- C. had an agreement terminated by any governmental agency for breach of agreement or for any cause based in whole or in part on an indictment or conviction;
- D. ever used a name, trade name or abbreviated name, or an Employer Identification Number different from those inserted in the Proposal;
- E. had any business or professional license suspended or revoked or, within the five years prior to proposal opening, had any sanction imposed in excess of \$50,000 as a result of any judicial or administrative proceeding with respect to any license held or with respect to any violation of a federal, state or local environmental law, rule or regulation;
- F. had any sanction imposed as a result of a judicial or administrative proceeding related to fraud, extortion, bribery, proposal rigging, embezzlement, misrepresentation or anti-trust regardless of the dollar amount of the sanctions or the date of their imposition;
- G. been, and is not currently, the subject of a criminal investigation by any federal, state or local prosecuting or investigative agency and/or a civil anti-trust investigation by any federal, state or local prosecuting or investigative agency, and
- H. shared space, staff or equipment with a big business entity





19. CODE OF ETHICS CERTIFICATION, AND CERTIFICATION OF NO SOLICITATION BASED ON COMMISSION, PERCENTAGE, BROKERAGE, CONTINGENT OR OTHER FEES

By signing on this Agreement, each Consultant and each person signing on behalf of any Consultant certifies, and in the case of a joint proposal, each party thereto certifies as to its own organization, that:

A. this organization has not made any offers or agreements or taken any other action with respect to any Authority employee or former employee or immediate family member of either which would constitute a breach of ethical standards under the Code of Ethics dated April 11, 1996 (a copy of which is available upon request to the individual named in the clause hereof entitled "Consultant's Questions"), nor does this organization have any knowledge of any act on the part of an Authority employee or former Authority employee relating either directly or indirectly to this organization which constitutes a breach of the ethical standards set forth in said Code; and

B. no person or selling agency other than a bona fide employee or bona fide established commercial or selling agency maintained by the Consultant for the purpose of securing business, has been employed or retained by the Consultant to solicit or secure this Agreement on the understanding that a commission, percentage, brokerage, contingent, or other fee would be paid to such person or selling agency.

The foregoing certifications shall be deemed to be made by the Consultant as follows:

\* if the Consultant is a corporation, such certification shall be deemed to have been made not only with respect to the Consultant itself, but also with respect to each parent, affiliate, director, and officer of the Consultant, as well as, to the best of the certifier's knowledge and belief, each stockholder of the Consultant with an ownership interest in excess of 10%;

\* if the Consultant is a partnership, such certification shall be deemed to have been made not only with respect to the Consultant itself, but also with respect to each partner.

Moreover, the foregoing certifications, if made by a corporate Consultant, shall be deemed to have been authorized by the Board of Directors of the Consultant, and such authorization shall be deemed to include the signing and submission of the proposal and the inclusion therein of such certification as the act and deed of the corporation.

In any case where the Consultant cannot make the foregoing certifications, the Consultant shall so state and shall furnish with the signed Agreement a signed statement which sets forth in detail the reasons therefor. If the Consultant is uncertain as to whether it can make the foregoing certifications, it shall so indicate in a signed statement furnished with its signed Agreement, setting forth in such statement the reasons for its uncertainty.



The Consultant shall immediately notify the Authority in writing during the on term of this Agreement or any extension of such period of any change of circumstances which might under this clause make it unable to make the foregoing certifications or require disclosure. The foregoing certifications or signed statement shall be deemed to have been made by the Consultant with full knowledge that they would become a part of the records of the Authority and that the Authority will rely on their truth and accuracy in signing this Agreement. In the event that the Authority should determine at any time prior or subsequent to the execution of this Agreement that the Consultant has falsely certified as to any material item in the foregoing certifications or has willfully or fraudulently furnished a signed statement which is false in any material respect, or has not fully and accurately represented any circumstance with respect to any item in the foregoing certifications required to be disclosed, the Authority may determine that the Consultant is not a responsible Consultant with respect to its proposal on the Agreement or with respect to future proposals on Authority agreements and may exercise such other remedies as are provided to it by the Agreement with respect to these matters. In addition, Consultants are advised that knowingly providing a false certification or statement pursuant hereto may be the basis for prosecution for offering a false instrument for filing (see, e.g. New York Penal Law, Section 175.30 et seq.). Consultants are also advised that the inability to make such certification will not in and of itself disqualify a Consultant, and that in each instance the Authority will evaluate the reasons therefor provided by the Consultant.

20. CONSULTANT ELIGIBILITY FOR AWARD OF AGREEMENTS - DETERMINATION BY AN AGENCY OF THE STATE OF NEW YORK OR NEW JERSEY CONCERNING ELIGIBILITY TO RECEIVE PUBLIC AGREEMENTS

Consultants are advised that the Authority has adopted a policy to the effect that in awarding its agreements it will honor any determination by an agency of the State of New York or New Jersey that a consultant is not eligible to propose on or be awarded public agreements because the consultant has been determined to have engaged in illegal or dishonest conduct or to have violated prevailing rate of wage legislation.

The policy permits a consultant whose ineligibility has been so determined by an agency of the State of New York or New Jersey to submit a proposal on a Port Authority agreement and then to establish that it is eligible to be awarded an agreement on which it has submitted a proposal because (i) the state agency determination relied upon does not apply to the consultant, or (ii) the state agency determination relied upon was made without affording the consultant the notice and hearing to which the consultant was entitled by the requirements of due process of law, or (iii) the state agency determination was clearly erroneous or (iv) the state agency determination relied upon was not based on a finding of conduct demonstrating a lack of integrity or violation of a prevailing rate of wage law.

The full text of the resolution adopting the policy may be found in the Minutes of the Authority's Board of Commissioners meeting of September 9, 1993.



21. NO GIFTS, GRATUITIES, OFFERS OF EMPLOYMENT, ETC.

During the term of this Agreement, the Consultant shall not offer, give or agree to give anything of value either to a Port Authority employee, agent, job shopper, consultant, construction manager or other person or firm representing the Port Authority, or to a member of the immediate family (i.e., a spouse, child, parent, brother or sister) of any of the foregoing, in connection with the performance by such employee, agent, job shopper, consultant, construction manager or other person or firm representing the Port Authority of duties involving transactions with the Consultant on behalf of the Port Authority, whether or not such duties are related to this Agreement or any other Port Authority agreement or matter. Any such conduct shall be deemed a material breach of this Agreement.

As used herein "anything of value" shall include but not be limited to any (a) favors, such as meals, entertainment, transportation (other than that contemplated by the Agreement or any other Port Authority agreement), etc. which might tend to obligate the Port Authority employee to the Consultant, and (b) gift, gratuity, money, goods, equipment, services, lodging, discounts not available to the general public, offers or promises of employment, loans or the cancellation thereof, preferential treatment or business opportunity. Such term shall not include compensation contemplated by this Agreement or any other Port Authority agreement. Where used herein, the term "Port Authority" shall be deemed to include all subsidiaries of the Port Authority.

The Consultant shall insure that no gratuities of any kind or nature whatsoever shall be solicited or accepted by it and by its personnel for any reason whatsoever from the passengers, tenants, customers or other persons using the Facility and shall so instruct its personnel.

In addition, during the term of this agreement, the Consultant shall not make an offer of employment or use confidential information in a manner proscribed by the Code of Ethics and Financial Disclosure dated April 11, 1996 (a copy of which is available upon request to the Office of the Secretary of the Port Authority).

The Consultant shall include the provisions of this clause in each subagreement entered into under this Agreement.

22. CONFLICT OF INTEREST

During the term of this agreement, the Consultant shall not participate in any way in the preparation, negotiation or award of any contract (other than a contract for its own services to the Authority) to which it is contemplated the Port Authority may become a party, or participate in any way in the review or resolution of a claim in connection with such a agreement if the Consultant has a substantial financial interest in the consultant or potential contractor of the Port Authority or if the Consultant has an arrangement for future employment or for any other business relationship with said contractor or potential contractor, nor shall the Consultant at any time take any other action which might be viewed as or give the appearance of conflict of interest on its part. If the possibility of such an arrangement for future employment or for another business arrangement has been or is the subject of a previous or current discussion, or if the Consultant has reason to believe such an

arrangement may be the subject of future discussion, or if the Consultant has any financial interest, substantial or not, in a consultant or potential consultant of the Authority, and the Consultant's participation in the preparation, negotiation or award of any agreement with such a consultant or the review or resolution of a claim in connection with such a agreement is contemplated or if the Consultant has reason to believe that any other situation exists which might be viewed as or give the appearance of a conflict of interest, the Consultant shall immediately inform the Director in writing of such situation giving the full details thereof. Unless the Consultant receives the specific written approval of the Director, the Consultant shall not take the contemplated action which might be viewed as or give the appearance of a conflict of interest. In the event the Director shall determine that the performance by the Consultant of a portion of its services under this Agreement is precluded by the provisions of this numbered paragraph, or a portion of the Consultant's said services is determined by the Director to be no longer appropriate because of such preclusion, then the Director shall have full authority on behalf of both parties to order that such portion of the Consultant's services not be performed by the Consultant, reserving the right, however, to have the services performed by others and any lump sum compensation payable hereunder which is applicable to the deleted work shall be equitably adjusted by the parties. The Consultant's execution of this document shall constitute a representation by the Consultant that at the time of such execution the Consultant knows of no circumstances, present or anticipated, which come within the provisions of this paragraph or which might otherwise be viewed as or give the appearance of a conflict of interest on the Consultant's part. The Consultant acknowledges that the Authority may preclude it from involvement in certain disposition/privatization initiatives or transactions that result from the findings of its evaluations hereunder or from participation in any agreements which result, directly or indirectly, from the services provided by the Consultant hereunder.

## 23. DEFINITIONS

As used in section 18 - 22, above, the following terms shall mean:

Affiliate - Two or more firms are affiliates if a parent owns more than fifty percent of the voting stock of each of the firms, or a common shareholder or group of shareholders owns more than fifty percent of the voting stock of each of the firms, or if the firms have a common proprietor or general partner.

Agency or Governmental Agency - Any federal, state, city or other local agency, including departments, offices, public authorities and corporations, boards of education and higher education, public development corporations, local development corporations and others.

Investigation - Any inquiries made by any federal, state or local criminal prosecuting agency and any inquiries concerning civil anti-trust investigations made by any federal, state or local governmental agency. Except for inquiries concerning civil anti-trust investigations, the term does not include inquiries made by any civil government agency concerning compliance with any regulation, the nature of which does not carry criminal penalties, nor does it include any background investigations for employment, or Federal, state, and local inquiries into tax returns.

Officer - Any individual who serves as chief executive officer, chief financial officer, or chief operating officer of the consultant by whatever titles known.

Parent - An individual, partnership, joint venture or corporation which owns more than 50% of the voting stock of the consultant.

Equipment Sharing - Equipment shall be considered to be shared whenever the Consultant shares the ownership and/or the use of any equipment with any other business or not-for-profit organization. Such equipment may include, but is not limited to, telephones or telephone systems, photocopiers, computers, motor vehicles, and construction equipment. Equipment shall not be considered to be shared under the following two circumstances: when, although the equipment is owned by another business or not-for-profit organization, the Consultant has entered into a formal lease for the use of the equipment and exercises exclusive use of the equipment; or when the Consultant owns equipment that it has formally leased to another business or not-for-profit organization, and for the duration of such lease the Consultant has relinquished all right to the use of such leased equipment.

Space Sharing - Space shall be considered to be shared when any part of the floor space utilized by the Consultant at any of its sites is also utilized on a regular or intermittent basis for any purpose by any other business or not-for-profit organization, and where there is no lease or sublease in effect between the Consultant and any other business or not-for-profit organization that is sharing space with the Consultant.

Staff Sharing - Staff shall be considered to be shared when any individual provides the services of an employee, whether paid or unpaid, to the Consultant and also, on either a regular or irregular basis, provides the services of an employee, paid or unpaid, to one or more other business(es) and/or not-for-profit organization(s), if such services are provided during any part of the same hours the individual is providing services to the Consultant or if such services are provided on an alternating or interchangeable basis between the Consultant and the other business(es) or not-for-profit organization(s). The services of an employee should be understood to include services of any type or level, including managerial or supervisory. This type of sharing may include, but is not limited to, individuals who provide the following services: telephone answering, receptionist, delivering, custodial, and driving.

24. The entire agreement between the parties is contained herein and no change in or modification, termination or discharge of this Agreement in any form whatsoever shall be valid or enforceable unless it is in writing and signed by the party to be charged therewith, or his duly authorized representative, provided, however, that termination in the manner hereinbefore expressly provided shall be effective as so provided.

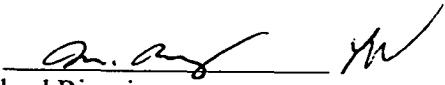
25. No Commissioner, officer, agent or employee of the Authority shall be charged personally by you with any liability or held liable to you under any term or provision of this Agreement, or because of its execution or attempted execution or because of any breach hereof.

**THE PORT AUTHORITY OF NEW YORK & NEW JERSEY**

26. If the foregoing meets with your approval, please indicate your acceptance by signing the original and the additional enclosed copy in the lower left-hand corner and returning them to the Authority.

Very truly yours,

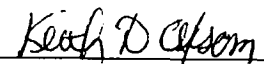
THE PORT AUTHORITY OF  
NEW YORK AND NEW JERSEY

By:   
Michael Rienzi  
Director, Procurement

Date 7/1/98

ACCEPTED:

STEVENS INSTITUTE OF TECHNOLOGY

By: 

Title: Director of Sponsored Projects

Date: 6/30/98

**SCOPE OF WORK**

(revised as of 7/18/97)

**Use of Dredged Materials as Fill In Transportation Related Projects**

**Submitted by:**

**The Sediment and Dredged Materials Technology Institute**

**A New Jersey Academic Research Consortium of  
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**Submitted to:  
The New Jersey Department of Transportation  
Division of Project Management  
1035 Parkway Ave.  
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## **SCOPE OF WORK**

### **Project Objectives**

The objective of this project is to provide testing and consultation services to the NJDOT associated with the utilization of treated sediment in transportation related projects. Such services include: review of existing test results and performance monitoring, performance of the necessary engineering and environmental testing associated with evaluating the potential use of cement stabilized dredged materials as fill in transportation related projects and providing assistance to NJDOT in developing design and material properties standards. Two potential uses for the resulting material will be investigated: Structural fill (roadway embankment) and non-structural fill (Slope Flattening and Infield Fill, Noise Wall Berms, Landscape Applications)

### **Scope of Services**

The overall scope of our services is to assist NJDOT in using treated dredged materials in roadway construction applications and developing guidelines necessary to enable field applications. This will be achieved through close cooperation between the different participating parties, task forces and their respective members. The main thrust of the proposed work will be the development of pertinent standards, procedures and protocols to enable the reuse of treated dredged material as fill in transportation related projects. This will entail a careful study of the dredged material, whether it is treated or not, engineering properties, environmental behavior, and economic considerations as outlined in the following sections.

### ***Task I-1 Engineering Properties***

***Sub-Task I-1.1: Characterization of Untreated Dredge Material:*** The Port Authority, US Army Corps of Engineers and other entities have been studying and testing harbor dredged materials for some time. As a result a partial testing and engineering material characterization database already exists with Port Authority. The limitations are that only a few locations in the harbor have been sampled and tested and additional information that may be available through the Army Corps and other entities has not been brought together into a single database. Consequently, it is proposed that all existing literature on the engineering properties will be compiled into a single data base, preferably in a binary format (computer disk), to facilitate end use and dissemination. The properties that will be included in this database are as follows:

1. Particle Size Distribution
2. pH
3. Solid Content
4. Moisture Content (both based on weight and volumetric)
5. Hydrocarbon presence
6. Heavy Metals



7. Organic Content
8. Consolidation Characteristics
9. Hydraulic Conductivity/Permeability
10. Atterberg Limits

This work has been already initiated with the close cooperation of Dr. Peter Dunlop, the Port Authority's chief geotechnical consultant. Finally, it is also proposed to concurrently pursue the mineralogical characterization of dredged materials by means of X-Ray Diffraction analyses on representative samples.

*Sub-Task I-1.2 :Develop Engineering Performance Criteria for Potential Uses:*

Traditional methods of specifying materials as fill for construction may not be applicable to the proposed treated dredged material end uses. Consequently, in order to evaluate material performance in reuse applications, it will be necessary to develop a set of non-traditional testing processes. The task group has already established a preliminary list of testing procedures which may be needed to evaluate the material engineering properties:

1. Atterberg Limits
2. Particle Size Analysis
3. Organic Content
4. Compaction Characteristics
5. Unconfined Compression
6. Cone Penetration
7. Direct Shear
8. Consolidation

There are a number of steps that must be taken to refine the above list into a practical form which may then be applied to the present work. First, it will be necessary to establish threshold performance values for each test listed for the proposed uses both as structural as well as non structural fill. If no definitive information on threshold values is available it will be necessary to perform some additional testing and/or conservatively estimate these properties. At the present time, it may be prudent to also define the anticipated effect of varying field conditions, such as water content, on both the engineering properties and environmental behavior of the treated sediment as a function of the anticipated end use. Overall, upon completion of this task a comprehensive test protocol will be developed, which will be then used to evaluate the engineering performance of the treated dredged material.

*Sub-Task I-1.3: Perform Engineering Properties Tests:* Upon receiving some additional amounts of the treated dredge sediment, an evaluation of the treated product will be performed based on the engineering performance test protocol developed in sub-task I-1.2. On the basis of the executed testing protocol the overall engineering behavior of the sediment will be evaluated and the potential for reuse will be assessed as a function of the type of transportation-related application.

### ***Task I-2 Environmental Behavior***

*Sub-Task I-2.1: Develop Test Protocols:* Based on the final list of end uses, and in close collaboration with the NJ DEP, a list of testing protocols will be developed in order to evaluate the environmental impact of the reused dredged material. Initial contacts have already been made with NJ DEP officials and the development of the testing protocols has been effectively streamlined. Overall, it seems that DEP will require testing for any potential contaminants including dioxin and any other leachates. The final form of the test being a function of the type of dredged material end use.

*Sub-Task I-2.2: Conduct Environmental Testing:* Following the completion of sub-task I-1.6, the treated dredge sediment will be tested according to protocols developed in sub-task I-2 in order to determine its field environmental behavior.

*Sub-Task I-2.3: Develop Fate and Transport Protocol:* Environmental fate and transport protocols will be developed for each of the anticipated end uses. These protocols will include general guidelines for assessing the potential environmental impacts resulting from the use of dredged materials in transportation related projects.

### ***Task I-3 MOU Assistance***

SDMTI will provide assistance to NJDOT, during the duration of this project, in developing any necessary Memoranda of Understanding with NJDEP or other agencies for the beneficial use of contaminated sediment in transportation related projects

### ***Task I-4 Economic Analysis***

An economic evaluation of the dredge-derived construction material will be performed for each type of proposed end use. Comparative economic and cost-benefit analyses will be performed to evaluate the competitiveness of such materials in the market place. A market analysis will be performed for each transportation related end use in New Jersey.

## **COORDINATION AND COLLABORATION**

All tasks of this project will be coordinated with NJDOT and in particular with the Specialty subgroups (Environmental, Engineering Properties, Economic Feasibility). We anticipate maintaining regular coordination with these groups and reach agreement before testing protocols are implemented. In addition, the SDMTI project manager will work closely with the NJDOT project manager to coordinate the project efforts with efforts of other agencies including but not limited to the Army Corps of Engineers, NJDEP, NJTA, New Jersey Transit, and USEPA. Such coordination will help avoid duplication will benefit the project and will facilitate dissemination of the project findings. NJDOT shall make the final decisions on this coordination, as well as, decisions in releasing any

statements regarding Capital Projects or delivery of the overall Capital Construction Program.

### Budget

The services described above will be provided to NJDOT for a duration of 12 months. The approximate budget for this period is presented below:

#### PROJECT BUDGET FUNDING REQUEST For 1 Year (1997-1998)

Use of Funds	Costs
<b>Salaries</b>	
1. Program Management	10,500
2. Senior Engineering Staff	28,000
3. Laboratory Assistant	18,286
4. Administrative Assistant	1,100
<b>Subtotal</b>	<b>57,886</b>
Benefits (30.62% on 1 and 2)	3,552
Graduate Laboratory Assist. Benefits (tuition)	13,000
<b>Total Salaries + Benefits</b>	<b>74,438</b>
<b>Materials and Supplies</b>	<b>6,000</b>
<b>Equipment</b>	<b>0</b>
<b>Analytical Laboratory (external)</b>	<b>0</b>
<b>Miscellaneous</b>	
Travel	1,000
Office Materials and Supplies	755
<b>Total Direct Costs (STEVENS)</b>	<b>82,193</b>
<b>Subcontracts</b>	
NJIT	10,000
<b>Indirect Costs</b>	
General Overhead (Stevens)	25,089
<b>Total</b>	<b>117,282</b>

*June 10, 1998*

*Use of Dredged Materials as Fill in Transportation Related Projects*

Based on discussions between NJDOT, NY/NJ PA and SDMTI on February 25, 1998 and March 6, 1998 meetings held at Stevens Institute of Technology, the following amendments on the scope of work submitted by the SDMTI (dated July 18, 1997) were agreed upon:

1. Overall, the original project scope had to be modified since we are now dealing with a specific sediment treatment method, namely cement stabilization. This entails placing the emphasis on shear strength, consolidation, swelling deformation durability and compactibility of the stabilized sediment. More importantly, there will be an increase in the amount of samples to be prepared and tested, reflecting the need to obtain additional information regarding the effects of treatment level as well as treatment water content on the resulting stabilized matrix. It was decided that a minimum of three levels of cement (9%, 11% and 13%) treatment and of water content (as sampled, +20% and -20%) will be pursued. Overall, we will be working with nine (9) basic mixes reflecting the variation of treatment and water content levels. Based on the number of tests required to execute this project (summarized below) we have estimated that a total of 600 lb (~12 5-gal buckets) of dredge sample will be required.
2. Another critical factor to be considered in this project is the effect of mellowing time on the resulting material properties. More specifically, it is the effects on strength development and sediment compactibility (maximum dry density achieved) that needs to be studied more carefully. However, at this point it was agreed that only limited pursuit of this end would be undertaken. This was agreed since there seemed to be a consensus that a 24 hour mellowing time in the preparation vessel (most likely a bucket type device) followed by a 3 day additional mellowing in moisture-tight plastic containers will most accurately reflect the actual field conditions. In order to simulate the excavation of the treated material out of the stockpiles in the field, following mellowing of the mixes in sealed buckets (simulating the stockpiling operation following additive incorporation), the soil mixes will be pushed through 3/8" screens.
3. As far as the characterization of the untreated dredge material, it was agreed that we will predominately depend on obtaining the characterization values from OENJ. This was deemed appropriate since there is a significant budget already set-up to do this type of work. We will perform index property testing on the untreated material as received as well as on the material resulting from treatment application. This will include water content, PI, Sieve and hydrometer analyses (wet method) and specific gravity on the untreated material as well as performing compaction tests in order to obtain the compaction curves for the different mixes. We will compact a total of six (6) samples per mix, which brings the total number of samples to be compacted to fifty-four (54). Furthermore, we need to perform some additional characterization

tests, like X-ray diffraction, on an as needed basis in order to address value inconsistency or missing data potential problems. To this end we will also utilize the already developed Port Authority database (prepared by Peter Dunlop).

4. On the development of engineering performance criteria it seemed appropriate at this point to predominately base our efforts on a slope stability analysis approach. More specifically, minimum values for adequate shear strength development in the treated sediment will be back calculated from performing a Limit Equilibrium slope stability analysis of the proposed embankment.
5. As far as the performance of engineering property tests is concerned, it seems imperative to perform consolidation, unconfined strength and swell tests. More specifically we will perform thirteen (13) consolidation tests, and thirty-six (36) unconfined compressive strength and swell tests. The duration of the consolidation (13 loading and unloading increments) and swell tests is approximately two (2) weeks per test whereas unconfined compressive strength tests can be all run in the same day. We will also perform six (6) isotropic consolidation, undrained loading with pore pressure measurements (IUP) triaxial strength tests. The duration of the triaxial tests is estimated to be approximately 3 days per test including setting up, backpressure saturation and actually testing the specimen. While performing the consolidation tests we will also be able to obtain information on the range of hydraulic conductivity values of the treated sediment. Finally, it should be noted that the critical path of the proposed testing and evaluation project is determined by the duration of the consolidation tests, since we can run a maximum of three (3) tests at the same time.

Based on this testing program, the proposed timeline/deliverables is shown in Table 1.

**QA/QC Summary:** All UCS and Swell tests will be run on duplicate samples; Two duplicate consolidation samples will be run for the lowest water content and highest cement content mixes in order to investigate unloading and reloading cycling effects; Two duplicate consolidation samples will be tested after only 7 days of curing to evaluate the effect of curing time on consolidation characteristics; Triaxial strength tests will only be performed for the lowest water content and highest cement content mixes, and three different tests will be performed for each of these two mixes so a Mohr-Coulomb failure envelope can be obtained;

Overall, according to the above schedule of tasks we should be able to provide you with the required data, in the form of a final draft Project Summary report, by the end of the second week of October 1998. That is, provided that we will initiate the project no later than June 1<sup>st</sup>, 1998. Finally, it should be noted that a final report on this project will be submitted following a period of 12 months after the submission of the Project Summary report (October 15, 1999).

**Table 1: Summary of Project Timeline/Deliverables**

Week	Preparation (# of samples)	Testing (# of tests)	Data Reduction/ Deliverables
0	a. Sieve and hydrometer b. Specific gravity	a. Water content b. PI c. XRD	a. Water content b. PI c. XRD
1		a. Sieve and hydrometer b. Specific gravity	a. Sieve and hydrometer b. Specific gravity
2			<b>Summary of Index Properties</b>
3	3 mixes: a. 18 CM b. 3 CON c. 12 UCS d. 12 swell e. 3 TX	a. 18 CM b. XRD	a. 18 CM b. XRD
4	2 CON (to be tested after 7 days of curing)	a. 6 7-day cure UCS b. XRD	a. 7-day cure UCS b. XRD
5	3 mixes: a. 18 CM b. 3 CON c. 12 UCS d. 12 swell e. 3 TX	2 7-day cure CON	
6		a. 6 7-day cure UCS b. XRD c. 2 7-day cure CON continued	7-day cure CON
8	3 mixes: a. 18 CM b. 3 CON c. 12 UCS d. 12 swell e. 3 TX	a. 6 UCS b. 12 swell c. 3 CON d. 3 TX e. XRD	
9		a. 6 7-day cure UCS b. 12 swell continued c. 3 CON continued	<b>Summary of CM testing</b>
10	2 CON	a. 6 UCS b. 12 swell c. 3 CON d. 3 TX	

		e. XRD	
11		a. 12 swell continued b. 3 CON continued	
12		a. 6 UCS b. 12 swell c. 3 CON d. 3 TX e. XRD	<b>Summary of UCS testing</b> <b>Summary of XRD</b>
13		a. 12 swell continued b. 3 CON continued	<b>Summary of TX testing</b>
14		2 CON	<b>Summary of swell testing</b>
15		2 CON continued	
16			<b>Summary of CON testing</b>
18			<b>Project Result Summary</b>

*Notes:* CM = compaction; CON = consolidation; UCS = unconfined compressive strength; TX = triaxial strength; XRD = X-ray Diffraction; all tests are performed after a 28-day curing period unless otherwise indicated; all deliverables are shown with bold characters; all deliverables will be in the form of written reports.

**Environmental Testing:** It was agreed that no laboratory testing will be performed by SDMTI under this contract. Results of environmental related tests performed by OENJ will be reviewed by SDMTI and the results will be summarized and discussed in the final report.

**INSURANCE PROCURED BY THE CONTRACTOR**

The Contractor, at its own expense, shall take out and maintain Commercial General Liability Insurance, including but not limited to Premises-Operations and Products-Completed Operations, with a Contractual Liability Endorsement covering the obligations assumed by the Contractor under this contract in not less than the following limits:

Commercial General Liability Insurance - \$1 million combined single limit per occurrence for bodily injury and property damage liability.

In addition, the policy shall name The Port Authority of New York and New Jersey as additional insured including but not limited to premises-operations and completed operations and shall contain a provision that the policies may not be canceled, terminated or modified without thirty (30) days written notice to the Facility Contract Administrator. Send a copy of the Certificate of Insurance to: The Port Authority of New York and New Jersey, Facility Contract Administrator, at the location where the work will take place. Moreover, the Commercial General Liability Policy shall not contain any provisions for exclusions from liability other than provisions for exclusions from liability forming part of the standard, basic unamended and unendorsed Commercial General Liability Policy.

*Further, unless otherwise agreed by the Authority, the liability policy shall be specifically endorsed, to prohibit the insurance carrier from raising any defense involving in any way jurisdiction of the Tribunal, immunity of the Authority, governmental nature of the Authority or the provisions of any statutes respecting suits against the Authority without obtaining written express advance permission from the General Counsel of the Authority. This clause shall also be included on the Certificate of Insurance.*

The Contractor shall also take out and maintain Workers' Compensation Insurance in accordance with the requirements of law.

To expedite approval of the required coverages, the Certificate of Insurance should be faxed to the Contract Administrator.

Within five (5) days after the acceptance of its bid or proposal, the Contractor must submit a hard copy of this certificate to the Port Authority Facility Contract Administrator. This Certificate of Insurance shall show evidence of the above insurance policy(ies), stating the number and/or purchase order number of this Contract. Upon request, the Contractor shall furnish to the Contract Administrator, a certified copy of each policy.

If at any time the above liability insurance should be canceled, terminated or modified so that insurance is not in effect as above required, then, if the Facility Manager shall so direct, the Contractor shall suspend performance of the Contract at the premises. If the Contract is so suspended, no extension of time shall be due on account thereof. If the Contract is not suspended (whether or not because of omission of the Manager to order suspension), then the Authority may, at its option, obtain insurance affording coverage equal to the above required, the cost of such insurance to be payable by the Contractor to the Authority.

**APPROVED**  
*Steven S. [unclear]*  
*6/14/98*