

SHORELINE STABILIZATION
NAVAL SUPPORT ACTIVITY ANNAPOLIS
CARR CREEK, ANNAPOLIS, MARYLAND

SCOPE OF WORK

**NAVAL FACILITIES ENGINEERING COMMAND WASHINGTON
AND**

COOPERATIVE AGREEMENT

FOR

SHORELINE STABILIZATION

AT

**NAVAL SUPPORT ACTIVITY ANNAPOLIS
CARR CREEK, ANNAPOLIS, MARYLAND**

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1. BACKGROUND

The North Severn Complex of Naval Support Activity (NSA) Annapolis is located on the north shore of the Severn River and its confluence with the Chesapeake Bay, across from the United States Naval Academy (USNA) and the City of Annapolis in Anne Arundel County, Maryland. The North Severn Complex encompasses approximately 850 acres and includes Greenbury Point.

The North Severn Complex was purchased by the Navy in 1909 for use as a dairy farm. From 1918 to 1996, the Naval Radio Transmitter Facility operated on Greenbury Point. During the Cold War, Greenbury Point was a key communications center for the Navy's submarine fleet. The antennas at Greenbury Point transmitted signal capable of penetrating the ocean, allowing communications with the submarines. By the early 1990's, advances in satellite communications made the antennas obsolete. After demolition, only 3 of the 19 antennas remain. The undeveloped land at Greenbury Point is now managed by NSA Annapolis as a resource conservation area with contiguous forest, tidal and nontidal wetlands resources and the surface danger zone (SDZ) for the USNA Outdoor Range Facilities. Since the 1930's extensive shoreline protection efforts, including revetments, wooden bulkheads, and earthen berms have resulted in only 12,500 linear feet of shoreline left remaining in natural condition.

The primary mission of NSA Annapolis is to provide general support, including underway seamanship and sail training; small arms weapons training; and navigation and engineering professional development, for midshipmen enrolled at USNA. The major facilities located at the North Severn Complex include the Navy Exchange, Commissary, Medical Center, Child Development Center, Family Service Center, USNA Golf Course, Brigade Sports Complex, athletic fields, marinas, firing range, and the Greenbury Point Nature Center. Carr Creek is located in between the USNA Outdoor Range Facility and the west side of Greenbury Point. Carr Creek is experiencing erosion due to wave action and surface erosion. Reach D1 and subset Reach E1 and E are identified as high priority areas due in part to the 4.2 mile fetch that is causing active erosion of the shoreline (Draft Carr Creek Shoreline Survey and Riparian Habitat Restoration Design Report, 2013)

At this site, the primary reasons for shoreline instability and erosion are:

- Erosion from wave action and runoff
- Instability due to shoreline face being steeper than the natural angle of repose
- Erosion and weathering of the cliff face due to the lack of vegetation on the steep sections
- A 4.2 mile fetch from the Chesapeake Bay

In addition there are also several minor causes for cliff erosion and instability at this site. These are:

- Falling trees dislodging chunks of soils within the root mass as they fall.
- Erosion from loss of vegetation from deer foot traffic.
- Burrowing animals.

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The impacts to the mission of NSA Annapolis if not implemented include: further degradation of soils that could lead to stabilization impacts to surrounding structures and the potential for a large block failure resulting in nonpoint source pollution. In addition, soil failures over time accumulate and could adversely impact the Chesapeake Bay with sediment runoff. This effort supports the requirement of the Sikes Act and the Naval Support Activity Annapolis Integrated Natural Resources Management Plan (INRMP) to mitigate soil erosion and conserve property. INRMPs offer a coordinated approach for incorporating ecosystem management efforts into the management of natural resources at DoD installations.

- a. Objective. The purpose of the Cooperative Agreement is to design and construct shoreline stabilization measures using low impact shoreline restoration using log toe, log sill, rock sill, and marsh creation techniques. Specifically, the work shall create structural stability along the indicated shoreline. Native plantings shall be used in the marsh creation areas as appropriate for shoreline stabilization. This will also involve a wetland verification using the new CWA definitions. In addition, the Cooperator shall obtain the necessary Federal and State permits and coordinate with the Maryland State Historic Preservation Office (MD SHPO) and all other required regulatory agencies to facilitate the repair to the shoreline to restore the structural integrity of the specified shoreline at indicated shoreline at NSA Annapolis Carr Creek. In addition, the permitting will contain designs for Sub reaches E1, E (134 linear feet), G (191 linear feet) and P (177 linear feet).
- b. Environmental Setting. The main shoreline that requires restoration is in Reach D1, sub reach E1 with Options for Reach E, G and Reach P construction. Reach D1 is on the east side of Carr Creek, adjacent to Reach C as identified in the North Severn Shoreline EA and identified as Reaches E1 and E in the Draft Carr Creek Shoreline Survey and Riparian Habitat Restoration Design Report. In addition, the Cooperator shall obtain the necessary Federal and State permits and coordinate with the to facilitate the design and implementation of log toe, log sill and marsh creation in appropriate areas within Reach D1.

A SITE VISIT BEFORE PROPOSAL SUBMISSION IS STRONGLY ENCOURAGED. The pre-award site visit will provide the opportunity to evaluate jobsite conditions, and to obtain clarification of project requirements.

2. POINTS OF CONTACT

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Prior to agreement award, inquiries regarding the negotiation and other aspects of the project should be directed to the Contract Specialist. After agreement award, technical and contract inquiries shall be directed to the Technical Point of Contact.

Contract Specialist

Ms. Olisha Costa
NAVFAC Washington
1314 Harwood Street, SE Bldg. 212
Washington Navy Yard, DC 20374
Telephone: (202) 685-8052
Email: brenda.uyeda@navy.mil

Technical Point of Contact (TPOC)

Mrs. Lisa Dosmann
NAVFAC Washington
1314 Harwood Street, SE Bldg. 212
Washington Navy Yard
Washington, D.C. 20374
Telephone: (202) 685-0262
Fax: (202) 685-0615
Email: heather.huddle@navy.mil

Installation/Station Point of Contact (SPOC):

Mrs. Katharine Seguin
NSA Annapolis Natural Resources Manager
58 Bennion Road
Annapolis, Maryland 21402
Telephone: (410) 293-1027
Email: katharine.seguin@navy.mil

3. DURATION

The period covered by this scope of work (including design preparations, report preparation, US Navy review, US Navy decision regarding work submittal of final invoice, final invoice payment, etc.) is 18 months from date of award of this Agreement.

4. GENERAL REQUIREMENTS

- a.** The Cooperator shall manage the total work effort and assure full and timely completion of services required under this Scope of Work. Included in this function shall be a full range of management duties including, but not limited to, planning, scheduling, inventory, analysis, and quality control.

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- b.** The Cooperator shall prepare and submit all required permits to the Contracting Officer via the Technical Point of Contract (TPOC; copy to the Station Point of Contract (SPOC)) prior to the initiation of any fieldwork that requires permitting.
- c.** The Cooperator shall comply with all applicable laws and regulations pertaining to the provision of safe workplace and to provide a work environment free of harassment and intimidation for such party's own employees and third parties.
- d.** If applicable, the Cooperator shall conduct literature review, field investigations and interviews with experts and authorities as necessary to accomplish the work described within this Scope of Work. The Cooperator shall, in particular, attempt to contact and utilize information from the local U.S. Navy offices and other professionals who are experienced in technical requirements under this Scope of Work.
- e.** The Cooperator shall comply with all applicable federal and state laws, such as, but not limited to, the Sikes Act, the Clean Water Act, Coastal Zone Management Act, Endangered Species Act and the Migratory Bird and Treaty Act.
- f.** The Cooperator shall ensure that the data obtained under the Agreement be scientifically defensible and suitable for publication. Methods of data collection and/or analyses shall be provided in the Cooperator's required Work Plan under Section 8 of the Agreement. The US Navy, at its discretion, may subject work plans, draft reports or draft manuscripts to external peer review.
- g.** The Cooperator shall inform, in writing (via email), the Contracting Officer (via TPOC and cc provided to SPOC) intent to publish or present any data or findings resulting from activities/research completed under this Agreement. In addition to approval from the Contracting Officer, permission from the installation Public Affairs Office must also be obtained prior to such publication or presentation.
- h.** The Cooperator shall inform, in writing (via e-mail) the SPOC (copy TPOC) of any unusual activity observed while conducting surveys in the field (e.g. trespassers or person in unauthorized areas). Information should include location, date, time and detailed facts regarding the activity. In addition, information regarding trespassers should be reported to the Installation Security Office as soon as possible via SPOC.
- i.** The Cooperator shall allow, throughout the term of the Agreement, the TPOC and the SPOC the opportunity to periodically observe the Cooperator's field activities, to review computer or paper files of raw data, prepared data (such as data analyses, summaries, maps, figures, tables, etc.), or any record deemed appropriate by the Contracting Officer in establishing the Cooperator's performance in fulfilling the requirements of the Agreement.

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- j.** The Contracting Officer, via the TPOC and/or SPOC, may request updated data (presented on maps, figures and/or tables) whenever the US Navy's need to obtain this information is before the next Monthly Report required under Section 8(c) of this Agreement. The Cooperator shall forward the requested data electronically within ten (10) days from the date of request. If the requested data cannot be provided within this time frame, the Cooperator shall forward electronically the most updated raw data to the Contracting officer, via the TPOC. The US Navy understands that facilitating the requested most updated data may reduce the amount of work that would normally be accomplished during the period of time required to complete the request. The Cooperator shall document the amount of efforts and its translated cost estimate that would have been incurred by the Cooperator to complete the request for updated data. This document shall be electronically forwarded to the Contracting Officer (via TPOC) to review so that the US Navy will have a good grasp on the amount of work displaced that would have normally been accomplished during the period of time required to complete the request.
- k.** The Government will not be responsible for the loss of or damage to property of the Cooperator, or for personal injuries to the Cooperator arising from or incident to the use of Government facilities or equipment.
- l.** The Cooperator shall indemnify and save harmless the Government, its officers, agents, servants and employees from all liability under the Federal Tort Claims Act (28 U.S.C. Sec 2671 et seq.) or otherwise, for death or injury to all persons, or loss or damage to the property of all persons resulting from the use of the premises by the Cooperator. This covenant shall survive the termination of the Agreement.
- m.** In the event of damage, including damage by contamination, to any Government property by the Cooperator, its officers, agents, servants, employees, or invitees, the Cooperator, at the election of the Government, shall promptly repair, replace, or make monetary compensation for the repair or replacement of such property to the satisfaction of the Government.
- n.** The Cooperator will be required to obtain insurance. All insurance required by the Agreement shall be in such form, for such periods of time, and with such insurers as the Contracting Officer may require or approve. A certificate of insurance or a certified copy of each policy of insurance taken out hereunder shall be provided to the Contracting Officer's local representative prior to use of the premises and facilities. The Cooperator agrees that not less than thirty (30) days prior to the expiration of any insurance required by the Agreement, it will deliver to the Contracting Officer's local representative a certificate of insurance or a certified copy of each renewal policy to cover the same risks. Cooperator shall furnish the insurance specified as follows and each policy of insurance covering bodily injuries and third party property damage shall contain an endorsement reading substantially as follows:

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- i. The insurer waives any right of subrogation against the United States of America which might arise by reason of any payment made under this policy.
- ii. NAVFAC Washington shall be given thirty (30) days written notice prior to making any material change in or the cancellation of the policy.
- iii. The United States of America (Dept. of the Navy) is added as an additional insured in operations of the policy holder at or from premises designated under the Agreement and owned by the United States.
- iv. This insurance certificate is for use of facilities under the Agreement.
- v. Loss, if any, under this policy shall be adjusted with the Cooperator and the proceeds, at the direction of the Government, shall be payable to the Cooperator, and proceeds not paid to the Cooperator shall be payable to the Treasurer of the United States of America.
- o. The Cooperator shall coordinate the work to be accomplished with the TPOC/SPOC in the specified work area. In addition, the Cooperator ensures all staff or personnel working under the Agreement shall not violate the Archeological Resources Protection Act, National Historic Protection Act or the Endangered Species Act while completing work required under the Agreement.
- p. Unexploded ordinance may be encountered while conducting fieldwork. The Cooperator shall not touch or attempt to pick-up any suspected ordinance. The Cooperator shall place flagging in the general area of the ordinance and notify the SPOC of the exact location of the ordinance as soon as possible.
- q. The Cooperator shall comply with all security rules, regulations, requirements, and day-to-day operational changes thereto. Unannounced changes to day-to-day operational procedures may, at times, prohibit the Cooperator access to the project area. The primary use of the Installation is for its military mission. Without prior notice, designated areas may become closed to the activities of the Cooperator. In some cases, due to operations or other circumstances, it may be necessary to deny the Cooperator access to the Installation for short periods of time. In such cases, the Cooperator will reschedule this work to the maximum extent possible. Should the U.S Navy require the Cooperator to leave the Installation, for a period greater than thirty (30) days (such as in the case of a national emergency), the Agreement may be terminated by either party unless an alternative agreement is reached between the Cooperator and the U.S Navy through a formal amendment of the Agreement. If the Agreement is terminated, the Cooperator shall not bill for work not completed subsequent to the termination date of the Agreement.

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- r. Photography is restricted on the Installation. The Cooperator is required to obtain permission from the U.S Navy prior to taking any photographs on the Installation. Only photographs of Agreement related activities will be permitted.
- s. Access. The Cooperator (with the assistance of the Government) will be required to obtain Rapid Gate Passes or long-term badges that will remain active for a year. If Rapid Gate is not used to gain access, the Cooperator must complete and submit a vetting form for all that will access the base to the SPOC at least one week prior to the kick-off meeting and field activities, as applicable, for base Security review and approval. If approved, a daily visitor pass will be issued which will have to be renewed each subsequent day that the cooperator is on site. Failure to do so will result in denial of base access. After- hour's access will have to be requested at least one day in advance and requires the presence of the SPOC or TPOC to remain on site. The Rapid Gate Passes will be obtained at the expense of the Cooperator.
- t. In order for personnel to access U.S Government property in an automobile, a valid driver's license, vehicle registration and proof of insurance are required. Copies of these documents shall be provided to the installation Security Office. All employees assigned to this job must be US citizens.
- u. Installation Permits. In addition to any regulatory required permits, the Cooperator shall coordinate with the SPOC to obtain any installation specific permits (i.e. Hot Work, Utilities, Outages, etc.) required prior to the initiation of any field work. Please be aware that permits may take up to 14 days for approval and will be coordinated by the SPOC.
- v. Utilities. In addition to using any government or utility company locating services available (i.e. Miss Utility), the Cooperator shall utilize a qualified private utility locating service company to locate all underground utilities in the work area. Any markings made during the utility investigation must be maintained throughout the duration of the field work. The Cooperator must physically verify underground utility locations by hand digging using wood or fiberglass handled tools when any adjacent exploration, excavation or construction work is expected to come within three (3) feet of the utility. SPOC will provide current GIS data for utilities, however, these are not guaranteed and additional survey work required as described above. Utility relocation may be necessary to accomplish the work. Utilities that require relocation shall be done so using the above installation permits and utility locating services. Relocation design and calculations will be provided for approval prior to relocation. All work will be in accordance with all Federal and State regulations.
- w. Any contact/discussion in regards to this project with regulatory agencies shall be initiated/conducted by the SPOC/TPOC.

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5. SECURITY

No classified information shall be presented in any document prepared under this Task Agreement. The Cooperator shall not release any information regarding the project, particularly the results developed under this Task Agreement, to any Federal, State or local (public or private) agencies or organizations without permission of the Government.

6. SPECIFIC REQUIREMENTS.

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a. Goal –

- c. The goal for shoreline stabilization, is to design and obtain the permits for shoreline restoration and stabilization measures for Reach E, E1, G and P. In addition, to construct the shoreline restoration and stabilization measures for Reach E1. These restoration and stabilization techniques should utilize the preferred methods of log toe, log sills, rock sills and marsh creation to provide structural repair and erosion prevention measures to restore the indicated shoreline identified in the attached map, **Appendix C**, and to conduct a wetland verification of tidal and nontidal wetlands present using the existing maps on Greenbury Point, **Appendix D** and the previous JD, **Appendix E**. Specifically, data sheets for the wetlands will need to be updated but no Jurisdictional Determination is required. The previous wetland delineation report will be provided. Specifically, shoreline stabilization measures should include marsh creation in appropriate areas. The work shall create structural stability to the indicated shoreline. Marsh creation shall occur in appropriate areas determined by the Cooperator. In addition, the Cooperator shall obtain the necessary Federal, State or local permits needed to construct the restoration.

b. Phase 1 – DESIGN

- i. Work Area. The area of work will consist of locations within NSA Annapolis, Carr Creek. The specific areas include: the shorelines that are identified for design and permitting are Reach E, E1, G and P in the attached map, **Appendix C**.
- ii. Task Definition.
 - a) The Cooperator shall survey, assess, and delineate the work area (including physical and biological settings, as appropriate) to facilitate design. Safety, work plans and work schedules are required for all field investigations.
 - b) The Cooperator shall develop draft and final designs and specifications to stabilize the shoreline and prevent erosion for the above defined reaches. Offsite disposal of excavated material is not anticipated. To the extent possible and practicable, the design shall include the re-use of materials. All

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planting is to be done with native species. Native species planting mix to be approved by the Navy prior to inclusion in final design.

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- c) Designs (draft and final) shall be geo-referenced to Maryland StatePlane_FIPS_1900_feet, North American Datum 1983.
- d) The Cooperator shall submit the design to the TPOC (copy to SPOC) for review and comment prior to submittal of any associated permit application process. The Cooperator shall be responsible for confirming site topography, utility location, and the presence of other constraints within the site area that may affect design and construction, and securing all necessary permits.
- e) The Cooperator shall prepare all draft and final permit application packages for the final design. All permit packages shall be submitted to the Contracting Officer Representative via the TPOC (copy SPOC) for review, comment and Navy signature routing (as appropriate), prior to finalization.
- f) The design and permit package shall be submitted to the TPOC and SPOC for review and comment. Final design documents shall include an outline for the sequence of construction and completed permit packages (draft and final). The Cooperator is responsible for obtaining any State, Federal and/or local permits for construction of Reach E, E1, G and P.

c. Phase 2 - CONSTRUCTION

i. Task Definition.

- a) At the discretion of the Navy, the Cooperator will be given a Notice to Proceed with construction, to include the construction of the final design for the shoreline stabilization design completed under Phase 1 for Reach E1 of this agreement. Phase 2 includes the acquisition of any remaining permits, insurance, etc. as described under Section 4 of this Agreement, oversight and construction of Navy-approved final design, and deliverables including safety plans, work plans, as-builts, etc., as discussed in Section 8 of this Agreement.
- b) The Cooperator will be responsible for removal of all debris generated during the project. All debris, including excavated materials with the exception of what is planned for reuse within the design, is to be taken off the base and disposed properly.
- c) The Cooperator will be required to obtain a dig permit and utility location services if the project warrants soil disturbance on shore.

d. Option 1 -Task 4 – Construction Reach G

Task Definition.

At the discretion of the Navy, the Cooperator will be given a Notice to proceed with construction, to include the construction of the final design for the shoreline stabilization design and permit completed under Phase 1 of this

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agreement. The optional task will include a new APP if necessary, oversight of the Navy approved final design, and deliverables including safety plans, work plans, as-builts, etc., as discussed in Section 8 of this agreement.

e. **Option 2- Task 5 – Construction Reach P**

At the discretion of the Navy, the Cooperator will be given a Notice to Proceed with construction, to include the construction of the final design for the shoreline stabilization design and permit completed under Phase 1 of this agreement. The optional task will include a new APP if necessary, oversight of the Navy approved and permitted final design and deliverables including safety plans, work plans, as-builts, etc., as discussed in Section 8 of this agreement.

f. **Option 3 -Task 6 – Construction of Reach E**

At the discretion of the Navy, the Cooperator will be given a Notice to Proceed with construction, to include the construction of the final design for the shoreline stabilization design and permit completed under Phase 1 of this agreement. The optional task will include a new APP if necessary, oversight of the Navy approved and permitted final design and deliverables including safety plans, work plans, as-builts, etc., as discussed in Section 8 of this agreement.

7. MEETINGS

- a. **Kick-off Meeting.** A Kick-off Meeting between the Cooperator, Contracting Officer, the TPOC, and the SPOC shall be arranged by the Cooperator within fifteen (15) days (or earlier) from the date of award of this Agreement. A pre-construction meeting shall be arranged by the Cooperator within thirty (30) days of Navy notification to proceed. The meeting shall primarily discuss the requirements of this Agreement, including the Work Plan, as stipulated in Section 8.
- b. **Site Visits.** Site visits shall be arranged by the Cooperator as needed to complete the tasks under this Agreement, or as requested by the TPOC and/or SPOC. Due to the location of the sites on Navy property, site visits will need to be coordinated with the SPOC. Refer to Section 4(s) for additional information.
- c. **Progress Meetings.** The Cooperator shall be available throughout the Agreement period to the TPOC and/or SPOC in matters regarding the tasks to be completed under this Agreement.

8. SCHEDULE AND SUBMITTALS

- a. **Safety Plan:** All field work, including investigations and construction, requires a safety plan. The Cooperator shall submit one (1) hardcopy and one (1) electronic copy (via e-mail) to the SPOC (copy to the TPOC) within thirty (30) days or less of Agreement award and at least three weeks prior to the projected start of any field

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- activities. The Safety Plan must be approved by the Installation Safety Office prior to the start of any fieldwork. The SPOC will provide the Cooperator with specific information on the required format and content of the Safety Plan; this may include an EM-385 compliant Safety Plan. However, the Safety Plan may include personal protective equipment (PPE) requirements, installation emergency POC and any conditions that would require an immediate work stoppage and a site evaluation by installation safety personnel.
- b. Work Plan/Work Schedules:** The Cooperator shall provide a preliminary project schedule at the kick-off meeting, and a draft work plan concurrent with the draft and final design packages for Phases 1 and 2. The work plan should include general information on staging, construction methodology, equipment to be used, project schedule, etc. Comments from the Navy will be submitted to the Cooperator within two weeks of receipt of the work plan/schedule. The Cooperator shall submit a final work plan (via e-mail) to the TPOC and SPOC within thirty (30) days or less of Navy comment receipt. If the TPOC and SPOC do not have any comments, suggestions, or edits on the Draft Work Plan, it shall become the Final Work Plan of the Cooperator under the Agreement. Work schedules shall be updated and submitted by the Cooperator electronically (via e-mail) to the TPOC and SPOC monthly (as part of the monthly report deliverable) or on request from the TPOC for all field activities.
- c. Monthly Reports:** Two (2) electronic copies of a monthly progress report are due by the seventh (7th) of the following month or the next workday if the 7th falls on a weekend, for work performed the previous month, for the duration of the Agreement. Electronic copies of these reports shall be concurrently submitted to the TPOC and the SPOC via e-mail. The progress report shall include, at a minimum, Agreement number, report date, report period, project name, names of investigators, meeting minutes (minutes shall include the date/time/location the meeting was held, attendees, relevant discussion notes, etc.), work performed during reporting period, including areas surveyed, problems encountered and recommendations to resolve issues, work anticipated for the next reporting periods and project status. Small maps (8.5 x 11) may be used to show locations.
- i. Meeting minutes – Please note Cooperator shall submit draft meeting minutes (electronically only) to the TPOC and SPOC within seven (7) days of the meeting occurrence. The TPOC and SPOC will provide comment within seven (7) days of receipt of draft minutes. Final meeting minutes may be included in the monthly progress report submittal.
- d. Draft Design (Phase 1).** The Cooperator shall prepare 2 hard copies and 2 electronic copies (via CDs) of a draft shallow water area design that is clear and concise, including text, tables, figures, and color photos (as appropriate). The design documents will summarize the findings of the field investigations as well as the draft construction sequence, specifications, and cost estimate, which shall be concurrently submitted, in a format readable by Microsoft Word, to the TPOC and SPOC within 6 months (or earlier) from the date of award of the Agreement.

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- The Government review of this submittal will focus on ensuring that the design meets Navy requirements. The Cooperator shall distribute this document to the TPOC and SPOC. The TPOC and SPOC shall provide (if there are any) the Cooperator their respective comments, suggestions, or edits on the Draft Design within thirty (30) days from the date of submittal of the Draft Design Report. Once the TPOC and POC have reviewed and commented on this submission, the Cooperator shall make the changes and provide the TPOC and SPOC a proof copy for approval before printing and releasing the next submittal.
- e. Final Design and Draft Permitting Package (Phase 1).** Two (2) hardcopies and two (2) electronic copies (via CDs) of the Final Design, including text, tables, figures, construction sequence, cost estimate, specifications, draft permit packages, and color photos (as appropriate), in a format readable by Microsoft Word, each to the TPOC and SPOC within 3 months (or earlier) from the date of award of the Agreement. The Cooperator shall incorporate any comments and concurrently submit one (1) hardcopy and one (1) electronic copy (via CD-ROM) of the Final Design to the TPOC and SPOC within 15 days (or earlier) from the receipt of comments. All electronic source files for tables and figures shall be labeled and submitted. All digital photographs shall be labeled with at least the following information: (1) subject/activity, (2) location (specific place), (3) date, and (4) name of photographer.
 - f. Finalized Construction Sequence (Phase 2):** Two (2) hardcopies and two (2) electronic copies (via CDs) of the Final Construction Sequence and permitting package, including text, tables, figures, and color photos (as appropriate), in a format readable by Microsoft Word, to the TPOC and SPOC within 30 days from the date of award of the Agreement for Phase 2. All electronic source files for tables and figures shall be labeled and submitted. All digital photographs shall be labeled with at least the following information: (1) subject/activity, (2) location (specific place), (3) date, and (4) name of photographer.
 - g. Final/As-Builts (Phase 2).** Two (2) hardcopies and two (2) electronic copies (via CDs) of the Final documents, including text, tables, figures, color photos, and the as-builts, shall be concurrently submitted, in a format readable by Microsoft Word, to the TPOC and SPOC within 45 days (or earlier) from the date of award of the Agreement. The TPOC and SPOC will submit comments, if applicable, on the Draft Final documents to the Cooperator within fifteen (15) days (or earlier) upon receipt of the Draft Final documents t. The Cooperator shall incorporate any comments and concurrently submit one (1) hardcopy and one (1) electronic copy (via CD-ROM) of the Final documents to the TPOC and SPOC within 15 days (or earlier) from the receipt of comments. All electronic source files for tables and figures shall be labeled and submitted. All digital photographs shall be labeled with at least the following information: (1) subject/activity, (2) location (specific place), (3) date, and (4) name of photographer. As-builts are to meet Navy GIS data standards.
 - h. Final Planting Documents (Phase 2) –** Summary report of what seed bed preparation was conducted, pesticides/herbicides applied, what was planted, when it was planted, etc.

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- i. Schedule Summary.** Project tasks shall be completed in accordance with the following schedule:

Submittal	Due Date
Cooperative Agreement (CA) Award	CAA
Kick-off Meeting/ Schedule	CAA + 15 days

Task 1 - Phase 1 (design) and wetland delineation/verification

Safety Plan	CAA + 30 days
Draft Design	CAA + 3 months
Final Design/Draft Permit Package	CAA + 5 months
Final Design/Final Permit Package	CAA + 6 months
Final Wetland Report	CAA + 12 months

Task 2 - Phase 2 (construction)

Notification to Proceed (NTP)	Pending Navy approval of final designs and permit receipt
Safety Plan	NTP + 30 days
Draft Work Plan/Schedule	NTP + 30 days
Final Work Plan	NTP + 60 days
Construction	TBD
As-Builts/Final Topo	CAA + 18 months
Final Planting Inspection	TBD

- j. Data.** All databases containing raw data and all associated electronic data summary and analytical files shall be formatted in Excel, Word, Dbase IV, or any compatible Microsoft database software and submitted to the TPOC and SPOC (via CD-ROM). Microsoft ACCESS files shall include all queries, reports, tables, etc.

- k. GIS Data.** See attachment A.

- l. Maps.** All maps created under the Agreement shall be incorporated in the draft and final versions of the Final Report. All maps shall be printed on 8.5 x 11-inch paper or 11 x 17-inch paper folded to match the size of the report(s). Unless otherwise indicated, all maps shall be printed at an acceptable scale using Maryland StatePlane_FIPS_1900_feet, North American Datum 1983. Electronic copies of all

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maps shall also be provided. All maps created for the Agreement shall contain the following information: title, scale bar, legend, date, north arrow and author of the map.

9. GOVERNMENT FURNISHED INFORMATION AND MATERIALS

- a.** The government will provide the following supporting materials in order to assist the Cooperator with the tasks associated with the Agreement.
 - i. Information, strategies or protocols that may apply
 - ii. GIS data and maps, if available
 - iii. Aerial photographs, if available
 - iv. Topographical maps, if available
- b.** The Government will provide a map or information indicating areas of special concern, i.e. areas that may contain protected cultural resources, if available.
- c.** The Government will provide real estate maps and facility information needed to complete the tasks.
- d.** Weather, illness, and other factors may cause some variation in the proposed schedule.

10. COOPERATOR FURNISHED ITEMS

The Cooperator shall provide all equipment (unless otherwise stated) and analyses necessary to complete the work described within this Scope of Work. All equipment (\geq \$100) purchased using Agreement funds remains the property of the Navy at the completion of the Agreement. The final report shall include an inventory of all equipment purchased \geq \$100, with the name of make, model, serial number, and maintenance records.

11. DATA AND PUBLICATIONS

- a.** The Cooperator acknowledges that information and data gathered or received pursuant to the Agreement may have regulatory and national security significance and that the unauthorized dissemination or use of this information might prejudice the interests of the U.S Navy and Department of Defense. Therefore, the Cooperator agrees not to disclose or use any information or data directly or indirectly acquired through activities associated with the Agreement to any person, organization or entity who is not a party to the Agreement, and to prohibit disclosure or use of the same by the Cooperator's personnel, representative, agents or associates unless disclosure is compelled by process of law, or the Navy authorizes disclosure or use in accordance with this Section of the Agreement. The terms "data", "information", "use", and "disclose" (and its forms and derivatives) will be interpreted very broadly. Limitations on disclosure encompass all forms of dissemination including the spoken word, written word and electronic media. "Use" includes, but is no

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- limited to, inclusion in academic papers, professional presentations and incorporation in other research not associated with the Agreement. All products, reports, filed notes, filed data forms, photographs or other information or other records or documents, including slide presentations produced using any information obtained under the Agreement are the property of the Department of the Navy
- b.** The Cooperator may disclose or use data and information only with the prior written approval of the US Navy (via the Contracting Officer) and per the terms of that approval. The Cooperator will submit a written request to disclose or use information or data to the Contracting Officer (cc provided to the SPOC and TPOC) explaining what information is to be disclosed or used, the reason for the disclosure or purpose for which the information or data will be used and to whom the information will be disclosed.
 - c.** The US Navy recognizes that the Cooperator may want to use information and data acquired through the Agreement in professional and academic manuscripts, publications and presentations and that such use may benefit not only those with an academic or professional interest in the information or data, but the general public as well. If authorization is given for such use, the Navy retains the right to review any manuscripts, publication or presentation in advance of publication or presentation for the purpose of ensuring the accuracy and releasability of the information or data presented. The Cooperator agrees that any manuscript, publication or presentation will include a statement as to the origin of the information or data obtained through the Agreement. Authorization for the use of information or data in one context is not to be construed as authorization for subsequent uses or purposes. The Cooperator shall submit at least two (2) hard copies of published manuscripts, and at least one (1) electronic copy of slides, and/or slide or poster presentations to the Navy, at no extra cost to the Navy.
 - d.** Recognizing the significant technical contributions of the Cooperator and US Navy TPOC and/or SPOC in the development of the Agreement's scope of work, its goals, objectives, experimental sampling design, data interpretation, review of technical reports, etc., US Navy TPOC and/or SPOC shall be accorded, if appropriate, joint-authorship credit for any publication of manuscript and technical presentation that is based upon the full use or partial use of the technical information, data, or interpretation of data produced under the Agreement. Appropriate joint-authorship credit means credit commensurate with the amount of work and technical contributions provided by the US Navy TPOC and/or SPOC, and fair with reference to credit given by the primary author (Cooperator) to other joint authors of the manuscript and technical presentation. Appropriateness of joint authorship is to be determined by reference to applicable authority, for example, the code of ethics, rules, regulations, or guidance set forth by institutions or other recognized venues on the publication of manuscripts and technical presentations.
 - e.** The Cooperator shall be responsible for ensuring all personnel, representatives, agents and associates participating in activities under the Agreement have read and acknowledged the provisions of this Section of the Agreement.

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12. RELEASE OF PUBLIC INFORMATION

The Cooperator shall not respond to any third party inquiries concerning the Agreement or concerning data and information obtained under the Agreement. All third party inquiries received by the Cooperator shall be directed to the Contracting Officer (via the TPOC and/or SPOC) for response in accordance with applicable law and regulations. Will require NRL PAO review/approval.

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13. PAYMENTS

- a. The Cooperator shall request reimbursement on a monthly basis.
- b. Advance payments may be requested by the Cooperator. Requests for advance payment shall be submitted on SF-270, "Request for Advance or Reimbursement." The form can be downloaded from the internet at <http://www.whitehouse.gov/omb/grants/sf270.pdf>.
- c. The Cooperator shall maintain advances of Federal funds in an interest bearing account. The Cooperator shall remit, at least quarterly, to the Navy interest earned on advances. The Cooperator may keep interest amounts up to \$100 per year for administrative expenses. The Cooperator shall submit a SF-272 "Federal Cash Transactions Report" along with interest earned. The form can be downloaded from the internet at <http://www.whitehouse.gov/omb/grants/sf272.pdf>.
- d. Partial payments equal to the amount of work accomplished may be made monthly from date of award. An amount not to exceed ten (10) percent of the total Agreement funds will be withheld until the final report, electronic data, and photographic information have been received (via the TPOC) and approved by the Contracting Officer.
- e. Any requirement for the payment or obligation of funds, under the terms of the Agreement, shall be subject to the availability of appropriated funds, and no provision herein shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act, 31 USC §1341 *et seq.* Nothing in the Agreement shall be construed, as implying that Congress will, at a later time, appropriate funds sufficient to meet deficiencies.
- f. The provisions of this Cooperative Agreement, including the requirement to remit interest earned on advances, shall be applied to sub-recipients/ sub-grantees performing substantive work under the Cooperative Agreement. Sub-recipients and sub-grantees are defined below.
- g. A Sub-recipient is the legal entity to which a sub-award is made and which is accountable to the recipient for the use of the funds provided.
- h. A Sub-grantee is the government or other legal entity to which a sub-grant is awarded and which is accountable to the grantee for the use of the funds provided.
- i. A sub-award is an award of financial assistance in the form of money, or property in lieu of money, made under an award by a recipient to an eligible sub-recipient or by a sub-recipient to a lower tier sub-recipient. The term includes financial assistance when provided by any legal agreement, even if the agreement is called a contract. It should be noted that sub-awards are for the performance of

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substantive work under awards, and are distinct from contracts for procuring goods and services.

- j.** A sub-grant is an award of financial assistance in the form of money, or property in lieu of money, made under a grant by a grantee to an eligible sub-grantee. The term includes financial assistance when provided by any legal agreement, even if the agreement is called a contract. It should be noted that sub-grants are for the performance of substantive work under awards, and are distinct from contracts for procuring goods and services.

14. GEOGRAPHIC INFORMATION SYSTEM (GIS) DELIVERABLES

a. Mapping requirements:

- i.** All GIS data must adhere to the standards in Appendix A and the requirements listed here.
- ii.** Construction drawing deliverables shall be reviewed for accuracy and completeness by a NFWASH GIS POC before acceptance.
- iii.** Where possible, the Cooperator will utilize source GIS data provided by NAVFAC Washington.
 - a)** A completed NAVFAC Washington GIS data release form is required.
 - b)** The Cooperator shall be provided a copy of any GIS data required meeting mapping deliverables in ESRI format (TBD shapefile or Personal Geodatabase). That data shall be structured according to the current version of the Spatial Data Standards (SDSFIE) in use by NAVFAC (version 2.6 as of October 010), and all data shall be returned in this format and structure.
 - c)** The GIS data provided shall be extracted from the Navy's GIS data Maintenance and Analysis (M&A) environment. This copy of the data will include existing populated layers, and non-populated layers. The non-populated layers are provided to ensure the data is returned in the required NAVFAC Washington GIS data model structure.
- iv.** The Cooperator shall consult with the government GIS POC before populating the attribute tables to ensure the population matches the current NDW interpretation of the SDSFIE. Layer-level metadata updates are required for all updated or new layer deliverables and the Cooperator shall consult with the government GIS POC to identify the specific metadata content requirements.

b. GIS Deliverable Requirements:

- i.** Format is to be determined by the government project manager and the Cooperator project manager.

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- a) The GIS deliverable shall be delivered on disc (CD-ROM or DVD) to the government for Quality Assurance (QA), and the government will have two weeks to QA the data and then the Cooperator will have two weeks to make any corrections and produce the final deliverable.

or:

- b) The Cooperator will be required to deliver a copy of all data into the appropriate geodatabase schema within the NDW GeoRepository, located in the Maintenance and Analysis environment (accessible via web access and Citrix). All data will be placed into a geodatabase editing version for government review, before acceptance and publishing. All completed and published data will be recorded in the NDW tracking table located in the M&A environment.
- ii. Reporting: The Cooperator shall provide a document (Microsoft Word format) that lists all layers developed or updated for the task.
- iii. Maps: In addition to any hardcopy or softcopy maps delivered, all source map files (ESRI ArcGIS (mxd)) for these maps shall be provided to the government.

APPENDIX: A- Geographic Information System (GIS) Deliverable Specifications:

The NAVFAC Washington GeoReadiness Center (GRC) is the single, authoritative source and distribution point for all geospatial shore installation data within the Naval District Washington (NDW) region.

1. Government Source GIS Data:

- a. The government shall provide a copy of any government-held GIS data required for the project to the contractor. All data shall be returned in the same format and structure unless the government specifies otherwise.
- b. A completed NAVFAC Washington GIS Data Release form is required for all data release.

2. Submittals, Government Review and Acceptance:

- a. All submittals shall be reviewed for structure and adherence to the required standards by an NDW GeoReadiness Program GIS Analyst before acceptance.
 - i. Review for accuracy and completeness according to the scope of work is the responsibility of the Project Manager or other designated subject matter expert personnel. NDW GeoReadiness, as part of the NAVFAC Asset Management Business Line, is not responsible for the accuracy and completeness of data acquired by other NAVFAC Business Lines, Navy organizations and commands.
- b. The government shall have two weeks to assess the submittal; the contractor shall then have two weeks to make any corrections and submit the final deliverable.
- c. All source code (ex. Python scripts, html files) and map files (ESRI ArcGIS (mxd)) shall be provided to the government.
- d. Failure to adhere to any of the stated delivery specifications could result in rejection of

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deliverables and nonpayment.

- e. Contractors should, at a minimum, submit data and documentation samples at 25% and 75% project completion to avoid the rejection of final deliverables.

3. GIS Data Specifications:

a. Data Structure:

- i. The government shall provide a copy of the current data model implementation (specific GIS layers and any required associated tables) to the contractor.
- ii. **Data Format:** All data submittals shall be delivered in a version compatible with ESRI version 10.5. NAVFAC's GIS data is in version 10.5 as of November 2019. Hj

b. Data Collection and Attribution:

- i. The U. S. Navy Installation Geospatial Information and Services (IGI&S) GIS Data Collection Guide (DCG) provides the requirements for GIS data collection, extraction and attribution. The government shall provide a copy of the latest DCG to the contractor before GIS work begins.
- ii. As of November 2019, the DCG does not yet include Stormwater and several other types of GIS data. The government will provide the required direction for any data not covered in the DCG.
- iii. The contractor shall consult with the government GIS POC before populating attribute tables to ensure the results meet the scope requirements.
- iv. The contractor shall identify the classification, type, location, ID number, and any other necessary attributes (specified by the Government) for all new/updated/edited features.

c. Required Standard Attributes, including Metadata*

Refer to the DCG for the required attributes for each Feature Class.

This excerpt is typical for most, see the DCG for complete list with definitions:

- INSTALLATIONID
- FACILITYFK
- OWNER
- AREASIZE
- AREAUNIT
- DATERECORDED*
- CREATOR*
- DATECREATED*
- COLLECTIONSOURCE*
- LOCACCY*
- EDITOR*
- DATEEDITED*

d. Feature Class (Layer) Metadata:

Populate these elements for each layer in the ArcCatalog Description tab:

- TITLE: Current SDS version layer name
- TAGS: ex. vegetation, hydrology, roads, etc.
- SUMMARY (PURPOSE): Briefly describe the purpose of the data.
- DESCRIPTION (ABSTRACT): SDS 4.x layer definition

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- CREDITS:
 - Data Delivery Date
 - Contract #
 - Task Order Title
 - Company Name
- USE LIMITATIONS: Populate with “*For Official Use Only*”

4. Quality Control and Quality Assurance:

The contractor shall take all appropriate and needed QA/QC measures to ensure that data is complete, topologically correct, accurate, structured correctly, and formatted correctly per the scope of work and complete (to include):

- a. ****All data shall be visually inspected by the contractor before submittal to the government.****
- b. The contractor shall add an attribute text field named “QA” to all GIS layer deliverables, and populate each with “Add”, “Modify”, or “Delete” as appropriate. This is necessary for the government to accurately and quickly evaluate the work.
- c. The numbers of records for all joined tables shall match, or the specific unmatched records shall be identified and explained to the satisfaction of the government.
- d. All domain constraints shall be adhered to, unless approved by the government, prior to submittal.
- e. No erroneous overshoots, undershoots, dangles, intersections or slivers.
- f. All area type features shall be closed polygons.
- g. Line features shall be snapped together where appropriate to support networks. For example, do not break linear features for labeling or other aesthetic purposes.
- h. Lines shall be continuous and point features shall be digitized as points. For example, point features, such as manholes, shall not be drawn using only a circle (polygon) to represent its location.
- i. Digital representation of the common boundaries for all graphic features must be coincident, regardless of feature layer
- j. Geometric network connectivity shall be maintained for utility networks, where specified by the scope of work.

5. Field Collection

- a. Where field data collection is stipulated in the contract, the contractor shall utilize conventional and other methods, such as Global Positioning System (GPS).

6. CAD Format Deliverables:

- a. CAD drawings may be accepted as GIS deliverables, but only when specified as such in the scope of work.
- b. All files must be accurately georeferenced and adhere to the requirements regarding the coordinate system, metadata, and the specified data Quality Control and Quality Assurance requirements.
- c. The government shall specify whether files are to adhere to either the SDSFIE or A/E/C CAD standard.

Appendix B – Naval Support Activity Annapolis North Severn Shoreline EA (will be provided by DoDsafe)

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Appendix C – Location E1, E, G and P



Legend

— Reach Breaks

**REACH BREAK MAP FOR
CARR CREEK RESTORATION**

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Appendix D – Draft Carr Creek Shoreline Survey

Will be provided by email

Appendix E - Greenbury Point Wetland Delineation/verification location

– JPA will be provided



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Nothing Follows

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