

Scope of Work

Location: Naval District Washington (NDW)
Title: FY25 NSFIIH Shoreline Restoration 4B6-1 & 2
Period of Performance: Base Period: 18 months after contract award
Optional Task 1: 14 months
Optional Task 2: 14 months
**Optional Tasks occur consecutively, if exercised. The total period of performance shall not exceed 46 months.*

Project Manager/ Technical

Point of Contact

(PM/APOC): Calle Biles 571-356-7241

Contracting Officer: Olisha Costa 202-685-1257

Activity Point of Contact (s) (APOCs):

All Tasks and Options	Seth Berry	NSF Indian Head	(301) 370-1177
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Introduction:

The contract of Natural and Cultural Resources Services will be a Cooperative Agreement between the Cooperator and the Government to help increase compliance with Federal Regulations. The Cooperator shall comply with all federal laws, such as but not limited to, the Clean Water Act (CWA), Coastal Zone Management Act (CZMA), Endangered Species Act (ESA), the Migratory Bird Treaty Act (MBTA), National Historic Preservation Act of 1966, as amended, Archeological Resources Protection Act of 1979, Archeological and Historic Preservation Act of 1974, National Environmental Policy act of 1969, Antiques Act, Historic Sites, Buildings, Objects and Antiquities Act of 1935, DOD Instruction 400.35 and 4715.03, OPNAVINST 5090.1D, Executive Order (EO) 11593, EO 11990, EO 13508, 32 CFR 190, 36 CFR 60, 36 CFR 61, 36 CFT 63, 36 CFR 229, 36 CFR 800, 43 CFR 7, United States Navy 3.01 Data Model, SDSFIE, NAVFAC Washington GIS Data Release form, the Sikes Act, as amended and others that are applicable to NAVFAC Washington installations. Specific tasks are listed below. *A site visit is strongly recommended before Cooperator cost proposal* *All Subcontractor cost estimates must be broken down and documented in writing*

Specific Tasks:

Task 1: Kickoff Meetings/Site Visits –

Neither the Cooperator nor any Subcontractor shall be onsite without proper coordination and notification to the Project Manager (PM) and Activity Point(s) of Contact (APOC). At least one (1) week prior coordination is required before conducting a kickoff meeting or site visit.

- A. The Cooperator project manager shall organize a kickoff meeting within three (3) weeks after receiving notice to proceed.
- B. The Cooperator shall present a proposed schedule of critical project milestones, including a site visit schedule and proposed working dates for discussion at the kickoff meeting.

- C. The Cooperator project manager and any personnel conducting the tasks identified in this scope of work must attend the meeting so they may be introduced to personnel in charge of restricted areas.
- D. The Cooperator shall provide meeting minutes to the PM and APOC within 5 business days of the meeting, to be counted as the task report.
- E. The Cooperator project manager shall be available for at least two (2) status update meetings during the life of this contract.

Task 2: Assessment, Survey and Permitting

Reach 4B is located off of Archer Road on Stump Neck. The project area will include roughly two (2) 250 linear feet of sill as depicted in Attachment A.1 and will tie into existing structures along the shoreline

- A. The Cooperator will be responsible for a Bathymetric Survey of the nearshore and updating full designs and surveys for Reach 4B. The Cooperator will be responsible to secure a permit for the implementation of Reach 4B6-1 & 2.
- B. The Cooperator will provide Preliminary plans and specifications to the PM and APOC for review and comment. The Cooperator shall be responsible for addressing all Navy/regulatory comments for the plans until the design is approved/signed by MDE.
- C. The Cooperator will be responsible for providing the Government with 30/60/90 percent plans during the course of the design phases for review and comment.
- D. The Cooperator will be responsible for providing the PM and APOC with a draft Joint Permit Application for review. The Cooperator is responsible for all fees and administrative support for permitting the project with regulatory agencies that shall include but is not limited to: the Joint Permit Application to the Maryland Department of the Environment Wetlands and Waterways Program, Maryland Stormwater and Sediment Program Review Division (Erosion and Sediment Control), US Army Corps if the project exceeds the Category B threshold (max 500 linear feet and 35 ft channel ward of the MHWL).
- E. The Cooperator is responsible for obtaining all permits required to implement the design for 4B6 as a standalone project. This includes but is not limited to: MDE Wetlands and Waterways Permits, Stormwater Management, SSPRD review with MDE. The Cooperator is responsible for all fees associated with the permitting and implementation of the approved design for 4B6 1 & 2. It is anticipated that the project will require a MDE General Discharge Permit and an NOI for the proposed work at 4B6.
 - a. The NSF Indian Head environmental department requires a wet signature from the IEPD for the SWM Plans before submitting to MDE for final approval. The Cooperator shall mail the final plans for signature and will receive a scanned signature page.

Task 3: Implementation of Reach 4B6-1 & 4B6-2

Reach 4B6 is located off of Archer Road on Stump Neck. The project area will include roughly two (2) 250 linear feet of sill as depicted in Attachment A.1.

- A. Implement the design for a total of 500 LF of shoreline stabilization. Implementation may include but not be limited to the installation of erosion control measures, hardened structure/revetment, and planting/seeding native and non-invasive species. Implementation also requires the acquisition of all relevant permits, insurance, oversight and construction of Navy-approved final design, and deliverables including safety plans, work plans, as-builts, etc.
- B. The Cooperator is responsible for 85% of survival of any individual plugs or potted vegetation planted as part of the project. The plantings shall have a one (1) year warranty that covers predation. As part of the warranty, three (3) invasive species spot treatments will be required for areas planted for one (1) year. Plant surveys for survival will occur at the six (6) month mark and one (1) year mark. At the one (1) year mark any dead plants in exceedance of the 85% shall be replaced with the same or comparable plant.
- C. The Cooperator shall obtain a toxic materials permit and any associated permits to treat invasive species as part of the warranty (must be obtained at least 45 days before planting). The applicators need to be certified for work on DoD property and comply with the NSA South Potomac Integrated Pest Management Plan.
- D. The Cooperator shall be responsible for attending pre-application site visits and post restoration site visits to close out the project with regulators.

Optional Task 1: Year 2 Monitoring

- A. The Cooperator is responsible for providing an annual assessment of the restoration that includes identification of the native species present with the percent coverage of each native species type, identification of invasive species present with the percent coverage of each invasive species present. percent coverage of invasive species and their common and technical name. A visual observation of the stability of the restoration that shall include any areas where there is excessive accretion or erosion. The Cooperator shall provide recommendations in the annual report that addresses any deficiencies found at the site.
- B. The Cooperator shall provide the annual report to the PM and APOC for review and comment.

Optional Task 2: Year 3 Monitoring

- A. The Cooperator is responsible for providing an annual assessment of the restoration that includes identification of the native species present with the total percent coverage of

each native species type, identification of invasive species present with the total percent coverage of each invasive species present. percent coverage of invasive species and their common and technical name. A visual observation of the stability of the restoration that shall include any areas where there is excessive accretion or erosion. The cooperator shall provide recommendations in the annual report that addresses any deficiencies found at the site.

- B. The Cooperator shall provide the annual report to the PM and APOC for review and comment.

Specific Personnel Requirements:

1. General Project Professionals-

- a. Project Principal- Person that is a principal, officer or senior manager of the Contractor with full and unlimited authority to represent the interest of the Contractor in all matters relating to the contract or to a specific Task Order. The Project Principal / Project Director shall be responsible for liaison between contract personnel and the Contracting Officer or NTR.
 - a. The Project Principal shall have a minimum of five years of full-time professional experience in natural management, environmental science or a closely related field.
 - b. And/or a minimum of two years of this experience in a project principal or project director capacity.
- b. Project Manager- The Project Manager coordinates the efforts of the other disciplines (including sub-contractors), ensuring timeliness, forecasting delays, etc. Additionally, this person will be the main point of contact for all required results and/or progress on projects.
 - a. The Project Manager shall have a minimum of A Bachelor's Degree in a natural resources-related subject.
 - b. In lieu of a degree, five (5) years of environmental restoration experience will meet this requirement; and at least two (2) years of experience in a project manager capacity.

2. Planning Professionals-

- a. Civil Engineer or Environmental Engineer- These positions shall be filled by persons with a BS degree in the appropriate engineering discipline and 4-5 years of specifically related experience. The Professional Engineer is an engineer who may prepare, review, update, and present design plans for environmental projects. The engineer may also provide reports on issues related to the environment, design systems that meet the requirements of the project scope while protecting and enhancing the environment.
 - a. Bachelor's degree in environmental engineering or a related field such as civil engineering. In lieu of a degree, five (5) years of engineering experience or any combination of both will meet this requirement; and
 - b. Must be licensed as a professional engineer in the state of Maryland.

- c. Must possess experience designing and preparing construction documents for shoreline restoration, stream restoration, and wetlands restoration.

During the first one hundred eighty (180) calendar days of performance, the Contractor shall make no substitutions of key personnel unless the substitution is necessitated by illness, death, or termination of employment. The Contractor shall notify the Contracting Officer within 15 calendar days after the occurrence of any of these events and provide the information required by paragraph (b) below. After the initial one hundred eighty (180) calendar day period, the Contractor shall submit the information required by paragraph (b) to the Contracting Officer at least 30 days prior to making any permanent substitutions.

The Contractor shall provide a detailed explanation of the circumstances necessitating the proposed substitutions, complete resumes for the proposed substitutes, and any additional information requested by the Contracting Officer. Proposed substitutes should have comparable qualifications to those of the persons being replaced. The Contracting Officer will notify the Contractor within 30 calendar days after receipt of all required of the decision on substitutions.

Submittals:

Meeting Minutes. The Cooperator shall submit draft meeting minutes (electronically only) to the PM and APOC within seven (7) days of the meeting occurrence. The PM and APOC will provide comment within seven (7) days of receipt of draft minutes. Final meeting minutes may be included in the monthly progress report submittal.

Task Summary Reports. Each task shall include an individual completed task report. The report will include information obtained through investigations and analyses conducted by the Cooperator. Maps identifying the location of any discovered sites will be included within the reports and may be used along with tables, figures, illustrations and photographs throughout the reports to more efficiently display site-related information. All text, maps and illustrations must be of high quality and easily reproducible on standard or color copiers. Measurements and/or quantities identified within the reports prepared under this contract shall be displayed in English and metric units. The Cooperator shall produce draft and final GIS layers electronically.

Monthly Progress Reports. The Cooperator shall prepare and submit monthly progress reports via email to the Government PM. Monthly progress reports shall address: (1) tasks completed during the reporting period and percent complete, (2) any problems encountered during the reporting period, and (3) tasks to be completed in the next reporting period. In addition, the monthly progress report shall include the percentage of work completed to date, contract number, report date and period, project name, and client name.

Safety Plan. Installation-approved safety plans are required for this task order. The safety plans should address safety hazards associated with construction risks and risks associated with performing field surveys. Safety plans will adhere to EM-385 standards. Safety Plans shall be reviewed and approved by the respective installation Safety Officer prior to beginning work (the approval process will take approximately two (2) weeks from the date of submittal). The Safety

Plan should include personal protective equipment requirements, installation emergency POCs and procedures, and any conditions that would require an immediate work stoppage (e.g., discovery of UXO or inclement weather). Draft safety plans may be submitted electronically to the PM and APOC for review and approval. The final, signed APP may also be submitted electronically to the PM and APOC and a hard copy should be kept on site.

Work Plan/Schedule. 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. 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 (2) weeks of receipt of the work plan/schedule. The Cooperator shall submit a Final Work Plan (via e-mail) to the PM and APOC within thirty (30) days of Navy comment receipt. If the PM and APOC 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 PM and APOC monthly (as part of the monthly report deliverable), or on request from the APOC, for all field activities.

Draft/Final Design, Construction Sequence, Planting Plan and Draft/Final Permitting Package (Phase 1). Electronic copies of the draft design shall be submitted to the PM and APOC. Two (2) hardcopies and an electronic copy 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 PM and APOC within twelve (12) months from the date of award of the Agreement. The Cooperator shall incorporate any comments and concurrently submit one (1) hardcopy and an electronic copy of the Final Design to the PM and APOC within fifteen (15) days 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.

Final/As-Built (Phase 2). Electronic documents of the Final documents, including text, tables, figures, color photos, data, and the as-builts, shall be concurrently submitted, to the PM and APOC within twelve (18) months from the date of award of the respective Option. The PM and APOC will submit comments, if applicable, on the Draft Final documents to the Cooperator within fifteen (15) days upon receipt of the Draft Final documents. The Cooperator shall incorporate any comments and concurrently submit one (1) hardcopy and an electronic copy of the final documents to the PM and APOC 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.

Document Requirements:

A. Document Standards – The Cooperator shall conduct reviews as needed to ensure that all deliverables are of high technical quality, meet Federal government and Navy standards for

formatting, and are free of grammatical/spelling errors. All deliverables shall adhere to Navy instructions.

B. Draft Reports – Draft reports are considered “drafts” only in the sense that they have not been reviewed and approved by the Government. In all respects, draft reports shall be/include:

- i. Complete, free of grammatical/typographical errors, and coherently written.
- iii. Numbered lines
- iv. Logos properly displayed
- v. Table of Contents
- vi. References, including copies of applicable standards and regulations
- vii. Glossary and acronym/abbreviation definitions
- viii. Sections, properly tabbed and organized
- ix. Text on drawings and figures shall be legible.
- x. The draft report should be in digital format in the original format (ie. Microsoft Word, Microsoft Excel, etc) in addition to PDF format.
- xi. Diagrams and drawings should be in the original, executable format (ie. AutoCAD, GIS) in addition to PDF format.
- xii. Include all official Government correspondence to date, including but not limited to: scope of work, meeting minutes, memorandums, and contract documents.
- xiii.
- xiv. State and explain all assumptions.

C. Final reports – The reports should be submitted electronically. It should incorporate all items listed under “Draft reports” and include Government comments with Cooperator responses.

D. Submittal Distribution List – Deliverables shall have separate deliveries to the PM and the APOC.

E. GIS Deliverables – The Cooperator shall develop GIS compatible layers for all data collected in association with the requirements for this project. The Cooperator shall submit the GIS data in accordance with the Naval District Washington Standards for Geographic Information System (GIS) Deliverables.

Cooperator shall coordinate with the installation GIS POC to ensure all data will be compatible with the NAVFAC GIS database

Documents Required by Cooperator. All documents referenced in this Scope of Work or other requested documents will be provided as needed to the Cooperator for purposes of completing proposal, initiating work, or for other reasons found necessary by the NAVFAC Washington Program Manager.

Security Requirements. No classified information shall be presented in any document prepared under this Task Agreement. The Cooperator shall not release any information regarding this 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.

General Requirements:

- A. The Cooperator shall coordinate installation access and security passes with the APOC.
- B. 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.
- C. The Cooperator shall prepare and submit all required permits to the Contracting Officer via the Project Manager prior to the initiation of any fieldwork that requires permitting. The APOC shall be copied on all permit submittals.
- D. 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.
- E. 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.
- F. The Cooperator shall comply with all applicable federal and state laws, such as, but not limited to, the Sikes Act, CWA, CZMA, ESA, the MBTA and State Historic Preservation Office (SHPO).
- G. The Cooperator shall ensure that the data obtained under this task order be scientifically defensible and suitable for publication. Methods of data collection and/or analyses shall be provided in the Cooperator's required submittals. The U.S. Navy, at its discretion, may subject draft reports or draft manuscripts to external peer review.
- H. The Cooperator shall inform, in writing (via email), the Contracting Officer (via the PM) intent to publish or present any data or findings resulting from activities/research completed under this task order. In addition to approval from the Contracting Officer and

PM, the APOC shall request permission from the installation Public Affairs Office prior to such publication or presentation.

- I. The Cooperator shall inform, in writing (via e-mail), the PM and APOC 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 the PM and APOC.
- J. The Cooperator shall allow, throughout the term of the task order, the PM and APOC 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 task order.
- K. The Contracting Officer, via the PM, may request updated data (presented on maps, figures and/or tables). 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 PM. The U.S. 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 PM) to review so that the U.S. 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.
- L. 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.
- M. 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.
- N. 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.
- O. 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
- P. 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:

- a. 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.
 - b. NAVFAC Washington shall be given thirty (30) days written notice prior to making any material change in or the cancellation of the policy.
 - c. 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.
 - d. This insurance certificate is for use of facilities under the Agreement.
 - e. 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.
- Q. The Cooperator shall coordinate the work to be accomplished with the PM and the APOC 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.
- R. Unexploded ordnance may be encountered while conducting fieldwork. The Cooperator shall not touch or attempt to pick-up any suspected ordnance. The Cooperator shall place flagging in the general area of the ordnance and notify the APOC and PM of the exact location of the ordnance immediately. The Cooperator shall leave the work site and suspend all work activities until the appropriate installation personnel have assessed the site/ordnance and authorized work to resume.
- S. 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.
- T. 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 task order related activities will be permitted. Coordination to obtain a camera permit shall be conducted through the APOC.
- U. Installation Access. The Cooperator (with the assistance of the Government) will be required to obtain access passes or long-term badges that will remain active for the duration of the project. The Cooperator must complete and submit a vetting form for all

that will access the base to the APOC at least 5 business days prior to the kick-off meeting and field activities, as applicable, for base Security review and approval. If approved, a visitor pass will be issued for up to 30 days before renewal is required. All employees assigned to this job must be US citizens; no foreign nationals are permitted. Failure to do so will result in denial of base access. The Cooperator shall maintain a complete and accurate list of all personnel for whom passes have been requested under this contract. Once forms are approved for access, the Cooperator will be notified.

- V. One-Day Passes: One day passes need to be requested 48 hours in advance with the submission of SECNAV 5512/1 (APR 2014) form. Submission of this form on the day of access may result in lengthy delays to the station. One day passes will be issued for site visit and one time deliveries only. After approval, they will be issued each work day at the Main Gate upon entry to the base and shall be returned to the Main Gate. These badges shall be worn at all times while on base. All personnel shall stay on the work site at all times and are not permitted to drive freely about the base or enter any building.
- W. 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.
- X. Installation Permits. In addition to any regulatory required permits, the Cooperator shall coordinate with the APOC to obtain any installation specific permits (i.e. Dig Permits and Comprehensive Work Approval Permit (CWAP)) required prior to the initiation of any field work. Please be aware that CWAPs may take up to 14 days for approval and will be coordinated by the APOC. The Cooperator must adhere to any installation specific requirements regarding work approval process.
- Y. 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. The APOC will provide current GIS data for utilities, however, these are not guaranteed and additional survey work required as described above.
Any contact/discussion in regards to this project with regulatory agencies shall be initiated/conducted by the Project Manager.

Schedule

Task 1	
Milestone	Date Due
Kickoff Meeting Task	CA + 15 days
Meeting Minutes	CA + 20 days

Task 2: Assessment, Survey & Permitting	Due Date
APP	CA + 30 days before start of work
Notification to Proceed (NTP)	TBD Pending Navy approval of final designs and permit receipt

Survey	NTP + 30 days
Design review 30%	NTP + 3 months
Design review 60% plus JPA	NTP + 5 months
Permitting timeline	NTP + 10 months
Draft Report	NTP +11 months
Final Report	NTP +12 months

Task 3: Implementation of Reach 4B6 1 & 2	Due Date
APP	CA + 30 days before start of work
Notification to Proceed (NTP)	TBD Pending Navy approval of final designs and permit receipt
Construction	NTP + 30 days
Construction As-Builts	30 days after restoration
Draft Report	NTP + 17 months
Final Report	NTP + 18 months

Option 1: Plant Monitoring: Year 2	
Milestone	Date Due
Kick off Meeting (onsite or phone)	TBD
Safety Plan	30 days prior to task start
Draft Report	CA+ 13 months
Final Report	CA+ 14 months

Option 2: Plant Monitoring: Year 3	
Milestone	Date Due
Kick off Meeting (onsite or phone)	TBD
Safety Plan	30 days prior to task start
Draft Report	CA+ 13 months
Final Report	CA+ 14 months

The Option 1 & 2 monitoring will not be concurrent and occur consecutively. The total award will be for up to 46 months including options.

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. A Comprehensive Work Approval Process (CWAP) will be provided by the Government to the Cooperator at the kick-off meeting outlining base operation related restrictions. The APOC will discuss the CWAP at the meeting. Restrictions are normally related to coordination with area managers to gain daily access and will be coordinated by the APOC.

E. Weather, illness, and other factors may cause some variation in the proposed schedule.

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.

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 not limited to, inclusion in academic papers, professional presentations and incorporation in other research not associated with the Agreement. All products, reports, field notes, field 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 POC and APOC) 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 reliability 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 POC and/or APOC 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 POC and/or APOC 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 POC and/or APOC, 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.

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 POC and/or APOC) for response in accordance with applicable law and regulations and may require NSFIH PAO review/approval.

APPENDIX 1

NAVFAC Washington - Procedures and Specifications for Geographic Information System (GIS) Deliverables:

1. Overview:

The GeoReadiness Center (GRC) is the single, authoritative source and distribution point for all geospatial shore installation data within the NDW region. The GRC houses the most current geospatial information for the entire NDW region and provides access to the comprehensive data

set and analysis tools to Regional and DOD decision makers/managers, sponsored Cooperators, and other sponsored individuals via a secure government Internet site.

2. Basic Requirements:

a. Submittals, Government Review and Acceptance:

i. All submittals shall be reviewed for structure and adherence to the required standards by an NDW GeoReadiness Program GIS Analyst before acceptance.

1. 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.

ii. The government shall have two weeks to assess the submittal; the Cooperator shall then have two weeks to make any corrections and submit the final deliverable.

iii. All source code (ex. Python scripts, html files) and map files (ESRI ArcGIS (mxd)) shall be provided to the government.

iv. Failure to adhere to any of the stated delivery specifications could result in rejection of deliverables and nonpayment.

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

b. **Data Retention:** All data (electronic and paper formats) must be removed from the Cooperator's site and returned to the government at the end of the task order period of performance and before the final invoice is approved.

c. Data Structure:

i. Unless specifically directed otherwise, all data shall be structured according to the current version of the Spatial Data Standards (SDSFIE) in use by NAVFAC. A copy of the current data model implementation (specific GIS layers and any required associated tables) shall be provided to the Cooperator.

ii. If new data is being created and the corresponding data structure does NOT yet exist, the Cooperator shall provide the GRC with a data dictionary identifying all of the SDSFIE Entity Types, attributes, and/or domain values

associated with the new feature(s), the geographic area(s) covered by the data and Spatial extent information prior to the creation/editing of GIS data. Acceptable formats: MS Excel or MS Word. Adobe PDF is not an acceptable format. New non-SDS compliant attributes (meeting SDSFIE criteria) will require precise schema definitions.

d. **Government Source Data:**

- i. The Cooperator shall be provided a copy of any GIS data required for the project from the government repository in an ESRI format.
- ii. All data shall be returned in this format and structure unless the government specifies otherwise.
- iii. A completed NAVFAC Washington GIS Data Release form is required prior to data being released to the Cooperator.
- iv. NDW GIS data shall only be released by, or with the written concurrence of NDW GeoReadiness personnel.

e. **Attribute Population:**

- i. The Cooperator shall consult with the government GIS POC before populating attribute tables to ensure the results match the current NFWASH interpretation of the SDSFIE.
- ii. The Cooperator shall identify the classification, type, location, ID number, and any other necessary attributes (specified by the Government) for all new/updated/edited features.

f. **GIS Data Format:** NAVFAC's GIS data is ERSI Geodatabase format, version 10.3.1 as of October 2016. Unless specified otherwise by NDW GeoReadiness, all ESRI format data submittals must also be in a version compatible with 10.3.1. Submittal format shall be determined by the government project manager and the Cooperator project manager.

3. **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.

4. **Coordinate System and Projection:**

All geospatial data, unless specified otherwise, shall be in the delivered in:

- NAD_1983_StatePlane_Maryland_FIPS_1900_Feet
- Projection: Lambert_Conformal_Conic

5. **Metadata:**

a. **Feature Level Metadata:** Feature-level (record level) attribute metadata is required to be populated for each GIS feature/record, per the current SDSFIE version.

Attributes for version 3.01 are:

i. **Name:** editor

1. **Description:** Cooperator or person that edited the feature attribution or geometry from its original or previous value. Last Name of the person and first initial. For example, Jane Smith would be attributed as SmithJ.

2. **Data Type:** String (20)

ii. **Name:** dateEdited

1. **Description:** Date that the feature was edited from its original or previous value.

2. **Data Type:** Date

iii. **Name:** collectionSource

1. **Description:** Describes how the data was collected and verified. (Example: GPS Field Collected – Mapping Grade).

2. **Data Type:** String (75)

3. **Domain:** CollectionSource

iv. **Name:** locAccy

1. **Description:** Describes the location accuracy of the data that was collected and verified.

2. **Data Type:** String (50)

v. **Name:** metaNotes (** use only if needed)

1. **Description:** Describes other details about what was created or edited and why.

2. **Data Type:** String (255)

b. **Layer Level Metadata:** Layer level metadata is required for all deliverables, structured according to the FGDC Content Standard for Digital Geospatial Data (CSDGM). Details on the standard can be found at <http://www.fgdc.gov/metadata/geospatial-metadata-standards>.

These elements are to be populated within the Description tab in ArcCatalog:

Under Overview -> Item Description section

i. **Title:** Current SDS version layer name

ii. **Credits:** Contract #, Task Order Title, Company Name

iii. **Description (Abstract):** SDS 3.0 layer definition

iv. **Summary (Purpose):** Describe briefly in simple terms, methods used to acquire the data and populate the GIS layer.

1. Example: *“This data was received in various formats which included ESRI Shapefile, ESRI Coverage, and AutoCAD format. The data was converted to ESRI Personal Geodatabase format for the analysis, translation, and QA processes, and copied into an ESRI Enterprise Geodatabase (Oracle) as the final step.*

2. Example: *“Wetlands Delineation collected via GPS, imported to an ESRI File GeoDatabase where additional attributes were populated”*

v. **Use Limitation:** *“For Official Use Only”*

Under Overview -> Topics Keywords section

vi. **Content Type:** Change to Map Files

vii. **Theme Keywords:** Common feature name, current version SDS Layer name and Data Set name.

viii. **Place Keywords:** Region, NAVFAC Washington, all applicable site names.
Example; Naval District Washington, NAVFAC Washington, Indian Head, Stump Neck

Under Overview -> Citation section

ix. **Dates Published:** Final deliverable date, after gov't QA & Acceptance

Under Resources -> References

x. **Aggregate Information:** Populate if applicable for derived data; information about omissions, selection criteria, generalization, definitions used, and other rules used to derive the data set.

6. Quality Control and Quality Assurance:

The Cooperator 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 Cooperator before submittal to the government.****
- b. The Cooperator 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 required attributes (per SDSFIE version 3.01) shall be populated.
- e. All domain constraints shall be adhered to, unless approved by the government, prior to submittal.
- f. No erroneous overshoots, undershoots, dangles or intersections in the line work.
- g. All area type features shall be closed polygons.
- h. Line features shall be snapped together where appropriate to support networks. For example, do not break linear features for labeling or other aesthetic purposes.
- i. 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.
- j. No sliver polygons
- k. Digital representation of the common boundaries for all graphic features must be coincident, regardless of feature layer
- l. Geometric network connectivity shall be maintained for utility networks, where specified by the scope of work.

7. Field Collection

- a. Where field data collection is stipulated in the contract, the Cooperator shall utilize conventional and other methods, such as a total station, or Global Positioning System (GPS) in accordance with the applicable Geospatial Positioning Accuracy Standards published by the Federal Geographic Data Committee (FGDC).
- b. At a minimum, the Cooperator shall provide, resource grade GPS collection at an accuracy level of $\pm < 1\text{m}$ and shall use differential correction to target accuracies of $\pm .5\text{m}$.
- c. Where appropriate (as stipulated in the contract or as otherwise determined by the Government), the Cooperator shall use survey grade GPS, at an accuracy level of $\pm 2\text{cm}$. Global Positioning System (GPS) data collection activities will be based on a post-processed environment using an accurately sighted base station. Base station files for post processing acquired locally (off-site CORS Continuous Operating Reference Station) will be verified for accuracy.
- d. GPS data on the location of utility lines and other features shall be captured at a minimum every 50ft and at each turn or bend in the line and processed as a line feature type. GPS data on the location of utility points and other features shall be captured at the centroid of the feature unless signal obstruction or access prohibits; otherwise points will be captured at a uniform distance and direction from the centroid and the offset captured in the metadata for that feature. Data on polygon features shall be collected at every vertex of the feature and processed as a polygon.
- e. All survey-grade data collected shall be provided to the Government in a digital format with an attached Survey Report identifying survey method, equipment list, calibration documentation, survey layout, description of control points, control diagrams, quality control report and field survey data.
- f. A digital Survey Control Database (consisting of a survey marker database and a survey traverse database) will be produced for all survey control points established under this contract, including the horizontal and vertical order and coordinate location of each point.
- g. Digitizing/Conversion: Where Digitizing/Conversion is stipulated in the contract, the Cooperator shall digitize/convert features from designated sources (including remotely sensed data, hardcopy scans and vector data) to support various GIS applications. Digitizing/conversion routines will insure that 90 percent of all features will measure within 0.01 inches when reproduced at the scale of original imagery or data source.

8. Specifications for GIS Layers and Attributes

The Cooperator shall consult with the government points of contact to ensure data is placed into the appropriate layer.

This section lists:

- [SDSFIE Required Global Attributes](#): These must be populated for each record in all layers
- [SDSFIE Required Global Metadata Attributes](#): These must be populated for each record in all layers

- [Project Specific GIS Layer and Attribute Descriptions](#): Specific to the scope of work, this section provides the full descriptions of each layer and available attributes. The Cooperator shall consult with the government points of contact to identify which specific non-required attributes to populate.

1. SDSFIE Required Global Attributes

These attributes must be populated in each record in all layers.

Name: sdsID

Description: A unique identifier for all features and objects in the SDSFIE. The sdsID field enables an organization to identify records that represent the same feature.

Data Type: GUID

Default Value: null

Domain: NA

Key: NA

Name: sdsFeatureName

Description: The common name of the feature.

Data Type: String (80)

Default Value: null

Domain: NA

Key: NA

Name: sdsFeatureDescription

Description: A narrative describing the feature.

Data Type: vChar (MAX)

Default Value: null

Domain: NA

Key: NA

Name: InstallationID

Description: Used to link the record to the applicable Installation record.

Data Type: String (20)

Default Value: null

Domain: NA

Key: Foreign

2. SDSFIE Required Global Metadata Attributes

These attributes must be populated in each record in all layers.

Name: editor

Description: Cooperator or person that edited the feature attribution or geometry from its original or previous value. Last Name of the person and first initial. For example, Jane Smith would be attributed as SmithJ.

Data Type: String (20)
Default Value: null
Domain: NA
Key: NA

Name: dateEdited

Description: Date that the feature was edited from its original or previous value.
Data Type: Date
Default Value: null
Domain: NA
Key: NA

Name: collectionSource

Description: Describes how the data was collected and verified. (Example: GPS Field Collected – Mapping Grade).
Data Type: String (75)
Default Value: null
Domain: CollectionSource
Key: NA

Name: locAccy

Description: Describes the location accuracy of the data that was collected and verified.
Data Type: String (50)
Default Value: null
Domain: NA
Key: NA

Name: metaNotes (** use only if needed)

Description: Describes other details about what was created or edited and why.
Data Type: String (255)
Default Value: null
Domain: NA
Key: NA

3. **Project Specific GIS Layer and Attribute Descriptions:**

- i. The government GIS POC and the Cooperator shall meet to identify the specific GIS layers and attributes to be populated.

Nothing Follows