

CONTRACT FOR PROFESSIONAL SERVICES
Between
O'BRIEN & GERE ENGINEERS, INC.
And
NEW CASTLE CONSERVATION DISTRICT

PROFESSIONAL ENGINEERING SERVICES
DELAWARE BAY DIKES REPAIR AND PREVENTION PROJECT
NEW CASTLE COUNTY
NCCD CONTRACT - 1362-00

This CONTRACT made effective the 7th day of Jan, 2011^{12 KCP} between O'BRIEN & GERE ENGINEERS, INC. (herein called the "CONSULTANT") and the NEW CASTLE CONSERVATION DISTRICT (herein called the "DISTRICT") witness that:

WHEREAS, the DISTRICT desires to engage the CONSULTANT to render professional services herein described in connection with the undertakings which are financed in part or in whole by the DISTRICT through granted, apportioned or appropriated funds, and

WHEREAS, the CONSULTANT is trained and qualified, by experience and facilities, to provide the engineering services described and has secured or will secure any appropriate permits and licenses required to fulfill this CONTRACT. Registration as a Delaware Professional Engineer is required for this CONTRACT, and

WHEREAS, the CONSULTANT has presented qualifications and has been determined to be qualified for this CONTRACT.

NOW THEREFORE, the parties hereto do mutually agree as follows:

1. Employment of Consultant

The DISTRICT hereby agrees to engage the CONSULTANT to perform tasks related to the engineering services and products described by this CONTRACT.

2. Time of Performance & Schedule

The services of the CONSULTANT are to commence as required by the DISTRICT after execution of this CONTRACT. The CONSULTANT shall complete the "SCOPE OF SERVICES" as outlined in this CONTRACT. Task and proposed completion dates are as follows:

<u>Task</u>	<u>Completion Date</u>
1 - Surveying	
Red Lion Dike (Field Data - Full Topo)	January 31, 2012
Red Lion Dike (Survey Plans - Full Topo)	February 29, 2012
New Castle Dikes (Field Data)	February 29, 2012
New Castle Dikes (Survey Plans)	April 30, 2012
Army Creek Dike	Fall 2012
2 - Dike Inspections (all Dikes)	February 15, 2012
3 - Geotechnical Investigations (all Dikes)	
Subsurface Invest / Lab Testing	January 31, 2012
Geotech Report	February 29, 2012
4 - Evaluation of Dike Crest Elevations (all Dikes)	February 29, 2012
5 - Preliminary Design (Red Lion and New Castle Dikes)	March 31, 2012
Army Creek Dike	Fall 2012

CONSULTANT will also strive to complete the Semi-Final Design of the Red Lion Dike (first part of Task 7) by April 30, 2012, but that will be dependent upon CONSULTANT's ability to maintain the schedule for Tasks 1 through 5 presented above.

3. Compensation

The DISTRICT agrees to pay the CONSULTANT a lump sum fee of Two Hundred Sixty Seven Thousand Five Hundred Dollars and No Cents (\$267,500.00) for the services described in Tasks 1 through 5 and Task 10 in the scope of services. The budget estimate for Tasks 6 through 9 (plus Task 5 for Army Creek and two meetings under Task 10) is \$700,000.00 since the full scope of these tasks will not be established until Task 5 (excluding Army Creek) has been completed. The rates for services shall be in accordance with the published rate of CONSULTANT and on file with the DISTRICT. No special compensation shall be made for vacation, sick or holiday periods. The DISTRICT provides no

insurance, including workman compensation, nor will any taxes be withheld. The **CONSULTANT** is responsible for all taxes including FICA payments as a self-employed consultant, all appropriate and necessary insurance including indemnification for the **DISTRICT**, and payments to all subcontractors engaged by the **CONSULTANT**, without additional compensation from the **DISTRICT**. Any expenses incurred by the **CONSULTANT** relative to the fulfillment of this **CONTRACT** shall be reimbursed in full if all such expenses are specifically agreed to in advance by the **DISTRICT**. Conditions for reimbursement such as limits, receipts, etc. will be specified at the time the **DISTRICT** agrees to allow the **CONSULTANT** to incur such expenses. Pricing of Tasks are as follows:

<u>Task</u>	<u>LumpSumPrice</u>	<u>BudgetEstimate</u>
1 – Surveying		
Red Lion Dike	\$54,000	
Buttonwood Dike	\$14,500	\$40,000 (w/ topo – Fall 2012)
Broad Marsh Dike	\$15,500	40,000 (w/ topo – Fall 2012)
Gambacorta Dike	\$15,000	40,000 (w/ topo – Fall 2012)
Army Creek Dike		50,000 (w/ topo – Fall 2012)
OBG Coordination	\$ 6,000	15,000 (w/ topo – Fall 2012)
2 – Dike Inspections (all Dikes)	\$12,500	
3 – Geotech Investigation (all Dikes) Subsurface Invest.	\$42,500	
OBG Oversight/ Geotech Report	\$21,500	
Lab Testing	\$6,000	
4 – Design Top of Dike Evaluation (all Dikes)	\$15,000	
5 – Preliminary Design	\$52,500	15,000 (Army Creek – Fall 2012)
6 – Risk Analysis		20,000
7 – Semi-Final and Final Design (all Dikes)		350,000
8 – O&M Plan (all Dikes)		20,000
9 – Permitting Assistance (all Dikes)		100,000
10 – Meetings (all Dikes)	\$12,500	10,000
Totals	\$267,500	\$700,000

4. **Payment**

The **CONSULTANT** shall be paid a total amount as set forth in paragraph 3 above upon the completion and acceptance of the work herein specified. Progress payments shall be made based upon a properly submitted invoice outlining the work accomplished. All invoices shall include the name of the project that is being worked on – Delaware Bay Dikes Repair and Prevention Project. Each invoice for Tasks 1 through 5 shall also show the amount of this portion of the **CONTRACT** (\$267,500.00), the total amount of the fee earned to date, the total amount of previous payments, and the total amount of the current bill. When the budget has been confirmed for Tasks 6 through 9, the same criteria will be followed. Such invoices shall be submitted monthly by the **CONSULTANT**, with progress payments to be made by the **DISTRICT** within thirty (30) days of the date of the applicable invoice.

5. **Consultants Save Harmless Clause**

The **CONSULTANT** and the **DISTRICT**, respectively, agree that each shall save harmless the other including their agents, officers and employees, from all claims or liability to the extent due to negligence of the **CONSULTANT** and the **DISTRICT** respectively including their agents, assignees, servants, or employees, and shall secure regular liability and property damage insurance coverage from an insurance company authorized to do business in the State of Delaware in an amount adequate to cover requirements of this contract. Nothing contained in this section shall be construed as limiting the **CONSULTANT'S** obligation to indemnify the **DISTRICT** or any of the above parties to the extent due to the **CONSULTANT'S**, the **CONSULTANT'S** agents', assignees' servants' or employee's negligence.

6. **Insurance**

The **CONSULTANT** shall, at its sole expense, maintain at all times during the term of this **CONTRACT**, insurance coverage with limits, coverage, and endorsements, if any, required as specified in "ATTACHMENT B" to this **CONTRACT**.

7. **Termination of Contract for Cause**

If the CONSULTANT shall fail to fulfill in a timely and proper manner his obligations under this CONTRACT, the DISTRICT shall have the right to terminate this CONTRACT by giving written notice to the CONSULTANT at least five days before the effective date of termination. In that event, and upon CONSULTANT's receipt from the DISTRICT of payment therefor, all finished or unfinished documents or other material prepared by the CONSULTANT under this CONTRACT shall become the property of the DISTRICT. The CONSULTANT shall receive just and equitable compensation for any satisfactory work completed.

8. Termination of Contract for Convenience of the District

The DISTRICT may terminate, for its convenience, this CONTRACT upon fifteen days written notice to the CONSULTANT prior to the effective date of termination. If the DISTRICT stops the CONTRACT, the CONSULTANT shall be paid an amount, which represents fair compensation for work performed. Upon payment therefor, all documents or other work finished or unfinished, worked on by the CONSULTANT shall become the sole property of the DISTRICT and shall be surrendered to the DISTRICT before or on the date of termination.

9. Interest of the Consultant

The CONSULTANT attests by signature hereon that the firm has not employed or retained any company or person, other than a bona fide employee or sub-consultant working solely for the CONSULTANT to solicit or secure the CONTRACT, and that he has not paid or agreed to pay any persons, company, corporation, individual or firm, other than a bona fide employee or sub-consultant working solely for the Firm any fee, commission, percentage, gift or any other consideration, contingent upon or resulting from the award or making of the CONTRACT. The CONSULTANT further covenants no present interest, direct or indirect, by appointment or election, in the management or administration activities within the New Castle Conservation District, the State of Delaware, or the County of New Castle. The CONSULTANT further covenants that he presently has no interest and shall not acquire any interest, direct or indirect, in management or administration activities within the New Castle Conservation District, the State of Delaware, or the County of New Castle.

If the CONSULTANT is involved or has interest as described above, or becomes involved in work or activities of potential conflict, notification will be made to the DISTRICT immediately requesting a determination as to the possibility of such work or activities being in conflict in the manner or degree of services required to be performed under this CONTRACT. The CONSULTANT further covenants that in the performance of this CONTRACT, the CONSULTANT shall employ no persons having any such interests.

The CONSULTANT shall also comply with the requirements of Title VI of the Civil Rights Act of 1964, as amended.

10. Publication, Reproduction and Use of Material

Upon payment therefor, the DISTRICT or its assigns, shall have unrestricted authority to publish, disclose, distribute and otherwise use, in whole or in part, original reports, data, or other materials prepared or worked on by the CONSULTANT under this CONTRACT. The DISTRICT will indemnify and hold harmless the CONSULTANT for the use or reuse of materials developed by the CONSULTANT under this contract unless CONSULTANT shall have given its prior approval for such use or reuse. Said approval shall not be unreasonably withheld. Credit will be given to the CONSULTANT for material used or published. Any change or other than agreed upon use of such materials prepared by the CONSULTANT under this CONTRACT shall be at the sole risk of the DISTRICT.

11. Project Description

The DISTRICT and the State of Delaware operate and maintain five (5) dikes along the Delaware Bay. From north to south, these dikes are Buttonwood, Broad Marsh, Gambacorta, Army Creek, and Red Lion. The dikes were constructed in the 1600's and have sustained varying degrees of damage over the years. In addition to remediation of deficient conditions, the dikes need to be raised to meet certain regulatory standards. The purpose of this project is to define a program that will maximize the flood protection benefits provided by the dike systems within the available budget and to design and construct the proposed dike improvements. This proposal covers the first phase of the program, which is intended to address the dike issues that are deemed to be most critical.

12. Final Product

The DISTRICT shall be provided with designs as outlined in the scope of services in Attachment A. The DISTRICT shall have the right to reproduce copies of plans and drawings for future activities as deemed appropriate by the DISTRICT.

All digital MAP files or CAD drawings produced for this project shall be provided to the DISTRICT. These files should be made available in a format that is compatible with Arc Info or Auto Cad release for Windows. The standard DWG or DXF format is preferred.

WITNESS WHEREOF, the DISTRICT and CONSULTANT have executed this CONTRACT as of the first date written above.

O'BRIEN & GERE ENGINEERS, INC.

WITNESS:

BY:

1/3/12
Date

NEW CASTLE CONSERVATION DISTRICT

WITNESS:

BY:

1/4/2012
Date

Kevin C. Donnelly
District Coordinator

ATTACHMENT A

PROFESSIONAL ENGINEERING SERVICES DELAWARE BAY DIKES REPAIR AND PREVENTION PROJECT NEW CASTLE COUNTY NCCD CONTRACT – 1362-00

SCOPE OF SERVICES

The scope of services provide that the **CONSULTANT** will:

Task 1 – Surveying

A topographic survey of the dikes will be necessary to establish the elevations and existing features that will serve as the existing conditions base map for preparation of construction contract drawings and to support analysis and design of dike improvements/repairs. For this purpose, **CONSULTANT** will subcontract a professional land surveyor licensed in Delaware to perform a detailed boundary and topographic survey of Red Lion Dike for use in preparation of final contract documents for the proposed dike improvements.

A less detailed survey will be conducted to obtain dike profiles and cross sections at critical locations for Buttonwood, Broad Marsh and Gambacorta Dikes. This survey data will be used to support engineering analyses and development of a preliminary design report that will present an evaluation of conceptual design alternatives and preliminary cost estimates. Topographic surveys of the New Castle Dikes and the Army Creek Dike will be undertaken in a later phase of this program, currently scheduled for Fall 2012.

Task 2 – Dike Condition Inspections

CONSULTANT will perform visual inspections of Red Lion, Buttonwood, Broad Marsh, Gambacorta, and Army Creek Dikes with a team of two engineers (three for Red Lion Dike) with substantial experience in dam/levee inspection, investigation, design and construction. During this inspection, **CONSULTANT** will identify any visible deficiencies in the dikes and appurtenant structures that could represent, or lead to, unsafe hydraulic, geotechnical, or structural behavior. The inspections will focus on previously identified deficient conditions, the current condition of the dikes for providing continuing flood protection, and potential methods for raising the dikes as appropriate. In addition, the inspections will be used to support the development of improvement/repair alternatives necessary to qualify the dikes for inclusion in the United States Army Corps of Engineers (USACE) Rehabilitation and Inspection Program (RIP) for non-federal Flood Control Works (FCW). The inspections will be conducted in accordance with the rating criteria outlined by the USACE FCW Inspection Guide.

Considering that inspection reports have been previously completed (by others) for Buttonwood, Broad Marsh, Gambacorta, and Army Creek Dikes, **CONSULTANT** will not prepare inspection reports for these dikes. Our inspections of these dikes will focus on confirming the findings of the previous reports and familiarizing ourselves with the condition of these structures for evaluating necessary improvements/repair concepts. Given that no previous inspection reports have been prepared for Red Lion Dike, this task will include preparation of a formal inspection report in accordance with the USACE FCW Inspection Guide.

Task 3 – Subsurface/ Geotechnical Investigations

Geotechnical investigations are necessary for developing the mechanical properties of the dike and foundation materials for use in analyzing stability and seepage behavior of the dikes under construction loading conditions and normal and extreme loading conditions during regular service. The geotechnical data will be needed for estimating dike stability and settlement magnitudes during and after dike raising construction and for the evaluation of improvement alternatives, and analysis and design of any structural improvements/repairs. Therefore, **CONSULTANT** will subcontract a qualified geotechnical drilling firm to conduct a subsurface investigation program for this purpose. This program will include a combination of cone penetration test soundings and soil borings through the dike crest at regular intervals along the length of the dikes to include critical locations, and installation of piezometers (PVC observation wells) in some of the borings to measure the phreatic surface (water level) in the dike. The cone penetration test soundings will be used to identify target locations for performance of soil borings for confirmation of soil types interpreted by the CPT and for collection of physical samples. Selected soil samples from the borings will be subjected to laboratory testing potentially consisting of water content, gradation analyses and Atterberg limits for identification of index soil properties. If cohesive soils are encountered, Shelby tube samples may be obtained for shear strength testing and/or consolidation testing of these soils. Depending on the findings of the geotechnical investigation, **CONSULTANT** may also conduct in-situ permeability testing of specific soil strata to aid in evaluation of seepage behavior through and beneath the dikes.

The scope of the subsurface investigation is as follows:

Advance a total of 24 Cone Penetration Test (CPT) soundings at the dikes; 4 soundings at Buttonwood Dike, 3 soundings at Broad

Marsh, 3 soundings at Gambacorta Dike, 6 soundings at Army Creek Dike, and 8 soundings at Red Lion Dike. All sounding locations will be established by CONSULTANT prior to mobilization. All of the soundings will be advanced to depths of 50 to 60 feet unless shallower refusal is encountered. An allowance for at least 5 (total) pore pressure dissipation tests has been included in the pricing for this task. Record groundwater levels in each sounding hole after removal of the drill rods and at least 24 hours after completion. Tremie grout all sounding holes after groundwater level collection with cement-bentonite grout.

After review of the CPT data, CONSULTANT will select 1 to 2 standard penetration test (SPT) borings per dike. For the purpose of this proposal, CONSULTANT has assumed the following scope:

- Buttonwood Broad Marsh, and Gambacorta Dike—1 SPT boring to a depth of 40 feet with continuous sampling to 10 feet and each 5 feet thereafter.
- Broad Marsh and Gambacorta Dikes—1 SPT boring to a depth of 30 feet with continuous sampling to 10 feet and each 5 feet thereafter.
- Army Creek and Red Lion Dikes—2 SPT borings to a depth of 30 feet with continuous sampling to 10 feet and each 5 feet thereafter. For Red Lion Dike, CONSULTANT has assumed an allowance for up to 4 Shelby tube samples.

All of the SPT borings shall be converted to temporary PVC observation wells to record the phreatic surface within the dikes. The water levels in the wells shall be recorded twice weekly for at least 4 weeks; water levels shall be recorded to the nearest 0.01 feet and shall be referenced to a depth below top of casing. The weekly readings will be timed to coincide with high, mid, and low tides (as practical) so that a record of the groundwater elevation with respect to the variable tide can be plotted. The wells will be abandoned in accordance with State regulations upon completion of the monitoring program.

This proposal includes a task for semi-final and final design and preparation of bid documents for Red Lion Dike, as outlined in Task 7 below. After completion of the preliminary design report outlined in Task 5 below, it is likely that additional geotechnical data may be required to support final design of the selected improvement alternative. Therefore, the scope and pricing of additional geotechnical work (if needed) will be defined at a later stage of design.

Task 4 – Evaluation of Design Crest Elevations

The completed surveys of the Red Lion, Gambacorta, Buttonwood and Broad Marsh Dikes will provide definitive information on the minimum, maximum and typical elevations of each dike's crest in NAVD 88 datum for comparison with various pertinent protection level elevations. CONSULTANT will proceed with an evaluation of the target dike crest elevations using the elevations identified in the Flood Insurance Study for New Castle County for floods of interest, in particular the 10- and 100-year return period events.

A stated goal in the Request for Proposals is to qualify the dikes for the USACE Rehabilitation and Inspection Program (RIP). The USACE RIP sets a minimum Level of Protection at the elevation of the 10-year flood plus two feet (10-yr +2). The previous reports indicate that this would be Elevation 8.2 feet NAVD 88 in New Castle County. At the same time, the 100-year Stillwater Elevation is reportedly 9.0 feet NAVD 88. FEMA certification of a levee for Flood Insurance Purposes, however, is the 100-year storm plus three (3) feet (E. 12.0). Due to the anticipated cost of raising the dikes to Elevation 12.0, CONSULTANT will not evaluate the FEMA certification level as an alternative under this program. Also to be considered is the DNREC Sea Level Rise policy, which provides a relationship of anticipated sea level rise as a function of time and project risk.

CONSULTANT will evaluate the crest elevation of each dike relative to the candidate requirements listed above and with consideration of the DNREC Sea Level Rise policy to identify design criteria for DISTRICT's consideration. The minimum criterion will be the USACE RIP minimum Level of Protection. CONSULTANT will consult with USACE regulatory and RIP staff and DNREC permit staff to clarify these regulators' permit policies with respect to dike elevations and Sea Level Rise policy. CONSULTANT will also meet with DISTRICT, DNREC and the New Castle Dike Management Advisory Committee to discuss goals and objectives related to the design Level of Protection.

The result of CONSULTANT's evaluation will be recommendations for Level of Protection design criteria alternatives for each of the four dikes listed above. The design criteria alternatives for each dike may differ based upon its present elevation relative to candidate criteria, risk analysis (Task 6), and judgment as to the feasibility of raising each dike. The recommended alternative Level of Protection Design criteria will be presented to DISTRICT in a Design Memorandum. With DISTRICT's concurrence, or with agreed-upon modifications, these alternative Design Criteria will be used in Preliminary Design (Task 5). During this task, CONSULTANT will also give consideration to the benefit of extending the dikes to provide additional flood protection to portions of New Castle that are currently unprotected. CONSULTANT has not included the cost of performing a preliminary design of this alternative in our Price Proposal, but if there appears to be any significant value in considering such dike extensions, CONSULTANT will notify the District and seek guidance before proceeding with the preliminary design of the New Castle Dikes.

Task 5 – Preliminary Design

Based on the results of the field investigations and the assessment of dike elevations described above, **CONSULTANT** will identify the deficiencies that need to be addressed to improve the stability and the flood control capabilities of the Red Lion, Buttonwood, Broad Marsh, and Gambacorta Dikes. The preliminary design of Army Creek Dike is scheduled for Fall 2012 and is not included in this current scope. Preliminary design alternatives will be developed for raising and repair of each of these dikes in accordance with the requirements of the USACE Rehabilitation and Inspection Program (RIP, PL 84-99) and cost estimates will be prepared for evaluation of the alternatives. Preliminary design reports will be prepared for each of the dikes and will include the following:

- Field inspection report for Red Lion Dike
- Results of the field inspections of the New Castle Dikes
- Results of the surveying and geotechnical investigations
- Plan view maps of the dikes and locations of observed deficiencies
- Conceptual sketches of the proposed design features
- Preliminary cost estimates for the proposed alternatives
- Conclusions and recommendations regarding proposed improvements

Draft copies of the preliminary design reports will be submitted to the **DISTRICT** for review and comment and **CONSULTANT** will meet with the **DISTRICT**, **DNREC** and the New Castle Dike Management Advisory Committee to discuss the reports and the review comments, and the next tasks to be undertaken for the program. It is assumed that **CONSULTANT** will proceed with a risk analysis and prioritization of the New Castle Dikes and with the semi-final and final design of the Red Lion Creek Dike, as described in the following tasks.

Task 6 – Risk Analysis of New Castle Dikes

In order to prioritize the Buttonwood, Broad Marsh and Gambacorta Dike improvements, **CONSULTANT** will conduct a risk analysis to establish the relative level of flood protection provided by each dike and the additional protection afforded by the proposed raising of these dikes. Available GIS and aerial topography information will be used in conjunction with relevant information that can be obtained from the flood elevation maps and the FEMA Benefit/ Cost Analysis Model prepared previously by Green Stone Engineering to estimate the number of inhabited structures that would be flooded by a failure of the dikes and the additional number of structures that would be protected by raising the dikes. The extent of flooding impacts on local infrastructure (e.g., roads and utilities) will also be considered in this analysis. The number of protected structures will be compared to the improvement costs for each dike to establish the priorities for moving forward with design and construction of the proposed improvements. During the preliminary design report review meeting described above, **CONSULTANT** will consult with the **DISTRICT** regarding other factors that should also be incorporated into the ranking system and, if necessary, **CONSULTANT** will develop a decision matrix with weighted factors to arrive at a numerical ranking of the dikes. Since the complete nature of this risk analysis will not be established until after the preliminary design of the New Castle Dikes has been completed, **CONSULTANT** are proposing a budget estimate for this task and recommending that the actual task price be determined at that stage of the project.

Task 7 – Semi-Final and Final Design of Red Lion Creek Dike

Based on the design approach recommended in the Preliminary Design Report and as agreed upon in the review meeting with **DISTRICT**, **CONSULTANT** will complete the engineering analyses required for developing the design details for the dike improvements (seepage, settlement, slope stability and structural stability analyses), but only for those dikes that will be completed under the current funding (\$3M). **CONSULTANT** will also prepare Contract Drawings and specifications for bidding and construction of the Red Lion Dike improvements. **CONSULTANT** will submit semi-final plans and specifications at an approximate 90% completion stage, along with a construction cost estimate. Following review and comment, **CONSULTANT** will meet with the **DISTRICT** and the State to discuss final revisions to the plans and specs, and will prepare the final drawings and specifications and the Engineer's Estimate of Probable Construction Cost on the basis of the review comments and the meeting. Since the State of Delaware is funding the project, **CONSULTANT** assume that standard State front-end documents for bidding requirements and general conditions will be used along with the O'Brien & Gere Contract Drawings, Special Provisions, technical specifications, and payment items.

The design approach will be established as a result of Tasks 1 through 5; therefore, as for Task 6, **CONSULTANT** are proposing a budget estimate for Task 7 and recommending that a firm price be established for this task after Task 5 has been completed. In order to reflect the cost of design for all of the dikes (semi-final and final design of the New Castle and Army Creek Dikes are scheduled for Fall 2012), the Budget Estimate for this task in the Price Proposal includes all five dikes.

Task 8 – Operations & Maintenance (O&M) Plan

CONSULTANT will also prepare an O&M Plan for the Red Lion Dike, including schedules for the various inspection, operation and maintenance activities that need to be performed for the dike and the flow control structure. The Plan will be prepared in accordance with USACE guidelines for O&M Plans for dikes and levees.

Task 9 – Permitting Assistance

CONSULTANT will prepare permit applications, provide supporting documentation, and attend meetings with appropriate regulatory agencies to assist in obtaining permits and approvals for construction of the Red Lion Dike improvements. **CONSULTANT** anticipate that these permit applications will include the following:

- Department of Defense – U.S. Army Corps of Engineers Individual or Nationwide Permit
 - DNREC Coastal Construction Permit
 - DNREC Wetlands and Subaqueous Lands Permit
 - Delaware Coastal Management Federal Consistency Certification
 - DISTRICT Sediment and Stormwater Plan
- Review
- New Castle County Department of Land Use approval (as required)

It is recommended that a pre-application meeting be held with these agencies during or immediately after completion of Task 5, to make sure that the critical regulatory issues are addressed in the design documents and to expedite the permitting process in general. Any other required permits/approvals will also be identified during this meeting.

Task 10 – Meetings

CONSULTANT envision that a number of meetings will be needed to properly coordinate the engineering efforts for this project and to gain consensus among the stakeholders for the dike improvements program. **CONSULTANT** has included the cost of the following meetings in our price proposal:

- Meeting with USACE to establish requirements for eligibility under PL 84-99
- Meeting with DISTRICT and DNREC to review design top-of-dike elevation options and recommendations
- Pre-application meeting with USACE, DNREC and DISTRICT to identify permitting requirements
- Meeting with DISTRICT, DNREC and New Castle Dike Management Advisory Committee to review preliminary design reports and to establish risk analysis methodology for New Castle Dikes
- Public information meeting for Red Lion Dike preliminary design
- Meeting with DISTRICT and DNREC to review semi-final design plans and specs for the Red Lion Creek Dike improvements
- Meeting with regulatory agencies to review design issues and review comments related to the permit applications and supporting documentation

Five of these seven meetings will take place prior to Task 6; therefore, **CONSULTANT** has included the cost of these five meetings in the base Lump Sum price and the other two meetings in the Budget Estimate column in our Price Proposal.

ATTACHMENT B

INSURANCE

Contractor shall, at its sole expense, maintain in effect at all times during the full term of the Contract of which this Attachment B is a part, insurance coverage with deductibles reasonably acceptable to the New Castle Conservation District and with limits not less than those set forth below with insurers licensed to do business in the State of Delaware, carrying a minimum of an A.M. Best's rating of B++X or the equivalent thereof, and acceptable to NCCD and under forms of policies satisfactory to NCCD. None of the requirements contained herein as to types, limits, deductibles and NCCD's approval of insurance coverage to be maintained by Contractors are intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by Contractor under this Contract.

1. Workers' Compensation.

Coverage Minimum Amounts and Limits

Workers' Compensation	Statutory Limits
Employers Liability	\$100,000 per accident
	\$500,000 policy limit per disease
	\$100,000 each employee by disease

2. Comprehensive General Liability.

Bodily Injury/Property Damage	\$1,000,000 each occurrence
	\$2,000,000 aggregate limit

The policy shall be in a form acceptable to NCCD endorsed to include NCCD as an additional insured and shall include but not necessarily be limited to the following coverage:

1. Premises/Operation;
2. Broad Form Contractual Liability in support of indemnity section of this Contract;
3. Broad Form Property Damage; and
4. Personal Injury Liability.

3. Comprehensive Automobile Liability.

Bodily Injury	Combined single limit of
Property Damage	\$1,000,000 per occurrence

This policy shall be on a standard form written to cover all owned, hired and non-owned automobiles.

4. Engineers Professional Errors & Omission

Professional Errors and Omissions	\$500,000 per occurrence
	\$500,000 aggregate

This policy is applicable only to those firms providing design work for NCCD. The coverage must remain in effect three years after substantial completion of the project and certificate of insurance must be forwarded to NCCD.

Evidence of the above-described insurance, represented by certificates of insurance issued by the insurance carrier must be furnished to NCCD within five (5) days following execution of the Contract. Certificates of insurance shall specify the additional insured status mentioned above. Such certificates of insurance shall state that NCCD will be notified in writing 30 days prior to cancellation, material change to the insurance coverage, or renewal of insurance.

