

AIWW Maintenance Project Mason Creek Crossing



Contract Documents and Specifications

FOR BIDDING
October 21, 2016

PREPARED FOR:



PREPARED BY:

GBANC
ENGINEERS ★ SURVEYORS

GAHAGAN & BRYANT ASSOCIATES OF NC, PLLC
295-A North Green Meadows Drive
Dutch Square Industrial Park
Wilmington, NC 28405-3933
PHONE: (910) 313-3338
FAX: (910) 313-6822
NC REGISTERED ENGINEERING FIRM

C.O.L. # P-0743

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INVITATION TO BID

NEW HANOVER COUNTY, NC

AIWW Maintenance Dredging Project – Mason Creek Crossing

New Hanover County is accepting sealed bids for the following project: AIWW Maintenance Dredging Project – Mason Creek Crossing. The work includes hydraulic dredging of approximately 75,000 cubic yards of shoaled material from the AIWW and Mason Creek Widener, with subsequent placement in the upland disposal area DA-241 adjacent to the dredge areas. The work also consists of minor repairs to the existing spillway, and monitoring environmental concerns.

Bid documents on compact disk in Portable Document Format (.pdf) may be acquired from Gahagan & Bryant Associates of NC, PLLC, (910) 313-3338, cmbryant@gba-inc.com. The charge for plans and specifications is a non-refundable payment of fifty dollars (\$50.00) per set. Complete sets of Bid Documents must be used in preparing Bids. New Hanover County assumes no responsibility for errors or misrepresentations resulting from the use of incomplete sets of Bid Documents. A pre-bid conference is scheduled for Monday October 31, 2016 at 2:00 p.m. at the offices of Gahagan & Bryant Associates of NC, PLLC located at 295-A North Green Meadows Drive, Wilmington, NC, 28405. Attendance is recommended but not mandatory.

All sealed Bids must be delivered or mailed to:

New Hanover County

Engineering Department

Attn: Layton Bedsole, Shore Protection Coordinator

230 Government Center Drive, Suite 160, Wilmington, NC 28403

Time is of the essence and any bid received after Wednesday November 9, 2016 at 3:00 PM (local time), whether by mail or otherwise, will be returned unopened. Bids shall be placed in a sealed envelope, marked in the lower left-hand corner with the project title, date, and hour bids are schedule to be received. Bidders are responsible for ensuring that their Bid is stamped by County personnel by the deadline indicated. Furthermore, the County reserves the right to reject any and all bids or to waive any and all technicalities or informalities. Bids shall be publicly opened and read on November 9, 2016 at 3:00pm in the New Hanover County Government Complex, Suite 601-Lucy Harrell Conference Room, 230 Government Center Drive, Wilmington, NC 28403.

ENVELOPES CONTAINING BIDS MUST BE IDENTIFIED AS “Bid for AIWW Maintenance Project – Mason Creek Crossing”. Bids shall be accompanied by a certified check, cashier’s check, U.S. Postal Money Order, or Bid Bond in an amount not less than 5% of Bid. **All bidders must be pre-qualified for bidding on New Hanover County capital improvement projects.** Pre-bid Qualification and Reference forms can be found on the County’s website: <http://legalinsurance.nhcgov.com/contractors-approved-for-bidding/>.

October 21, 2016

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A. CONTRACT PROVISIONS

SECTION I

INSTRUCTIONS TO BIDDERS / EVALUATION FACTORS FOR AWARD

SECTION II

CONTRACT CLAUSES

SECTION III

GEOTECHNICAL DATA

SECTION IV

WEATHER, WATER STAGES AND TIDE DATA

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SECTION I
INSTRUCTIONS TO BIDDERS / EVALUATION FACTORS FOR AWARD

1. **AMENDMENTS TO INVITATIONS FOR BIDS**
2. **SUBMISSION OF BIDS**
3. **EXPLANATION TO PROSPECTIVE BIDDERS**
4. **LATE SUBMISSIONS, MODIFICATIONS, AND WITHDRAWALS OF BIDS**
5. **PREPARATION OF BIDS**
6. **BID GUARANTEE**
7. **SUBCONTRACTORS**
8. **CONTRACT AWARD**
9. **PROTEST PROCEDURES**
10. **TYPE OF CONTRACT**
11. **CONTRACT DOCUMENTS**
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14. **DISTRIBUTING SOLICITATION AMENDMENTS**
15. **OBTAINING INFORMATION REGARDING THIS SOLICITATION**
16. **LEGAL REQUIREMENTS**

GENERAL STATEMENTS

The Contractor shall furnish all labor, equipment, materials, and services to schedule, coordinate, supervise, perform, and provide quality control for the removal of shoaled material within the AIWW and the Mason Creek widener as defined by these specifications, associated plans, and permit conditions specified within North Carolina Division of Coastal Management (NCDCM) and USACE Permits.

NOTE: For the purposes of the Contract Documents the following representations shall apply:

County – New Hanover County

Engineer – Gahagan & Bryant Associates of NC, PLLC

Contractor/Subcontractor – provider of construction services

1. AMENDMENTS TO INVITATIONS FOR BIDS

- (a) If this solicitation is amended, then all terms and conditions which are not modified remain unchanged.
- (b) Bidders shall acknowledge receipt of any amendment to this solicitation by identifying the amendment number and date in the space provided for this purpose on the form for submitting a bid.

2. SUBMISSION OF BIDS

- (a) Bids and bid modifications shall be submitted in sealed envelopes or packages (1) addressed to the office specified in the solicitation, and (2) showing the time and date specified for receipt, the title “Bid for AIWW Maintenance Dredging Project – Mason Creek Crossing”, and the name and address of the Bidder.
- (b) Bidders using commercial carrier services shall ensure that the bid is addressed and marked on the outermost envelope or wrapper as prescribed in subparagraphs (a)(1) and (2) of this provision when delivered to the office specified in the solicitation.

3. EXPLANATION TO PROSPECTIVE BIDDERS

Any prospective bidder desiring an explanation or interpretation of the solicitation, drawings, specifications, etc., must request it in writing soon enough to allow a reply to reach all prospective bidders before the submission of their bids. Questions received less than seven days prior to the date for opening of bids may not be answered. Only questions answered by formal written Addenda will be binding. Oral explanations or instructions given before the award of a contract will not be binding. Any information given a prospective bidder concerning a solicitation will be furnished promptly to all other prospective bidders as an amendment to the solicitation, if that information is necessary in submitting bids or if the lack of it would be prejudicial to other prospective bidders.

4. LATE SUBMISSIONS, MODIFICATIONS, AND WITHDRAWALS OF BIDS

- (a) Bidders are responsible for submitting bids, and any modifications or withdrawals, so as to reach the County office designated in the Invitation To Bid (ITB) by the time specified in the ITB.
- (b) Any bid, modification, or withdrawal received at the County office designated in the ITB after the exact time specified for receipt of bids is “late” and will not be considered by the County and will remain unopened.
- (c) Acceptable evidence to establish the time of receipt at the County installation includes the time/date stamp of that installation on the bid wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of County personnel.

- (d) If an emergency or unanticipated event interrupts normal County processes so that bids cannot be received at the County office designated for receipt of bids by the exact time specified in the ITB and urgent County requirements preclude amendment of the ITB, the time specified for receipt of bids will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal County processes resume.
- (e) Bids may be withdrawn by written notice received at any time before the exact time set for receipt of bids. A bid may be withdrawn in person by a bidder or its authorized representative if, before the exact time set for receipt of bids, the identity of the person requesting withdrawal is established and the person signs a receipt for the bid.

5. PREPARATION OF BIDS

- (a) Bids must be (1) submitted on the forms furnished by the County or on copies of those forms, and (2) manually signed. The person signing a bid must initial each erasure or change appearing on any bid form. The forms must be completed in ink. All names must be typed or printed below the signature.
- (b) The bid form may require bidders to submit bid prices for one or more items on various bases, including--
 - (1) Lump sum bid; or
 - (2) Units of construction;
 - (3) Each bidder shall indicate by attachment to his Bid the plant available to him which he proposes to utilize for the work.
 - (4) A statement will be required of bidders setting forth work to be subcontracted along with the names and addresses of subcontractors and will include such information as necessary to establish their technical and financial capability.
 - (5) The Contractor will insert his anticipated production rate on the bid forms. This rate will be a factor in the evaluation of the bid submittals.
 - (6) The Contractor shall be properly certified or licensed with the State of North Carolina and shall be qualified both technically and financially to perform the Work. Certifications and/or licenses numbers shall be indicated on the bid forms.
- (c) All costs associated with the preparation and delivery of bids shall be borne solely by the Bidder.

6. BID GUARANTEE

- (a) Each bid must be accompanied by a Bid Bond or Deposit in a sum of not less than five percent (5%) of the total Bid ("Bid Guarantee"). The Bid Bond form is included in Appendix A. All checks should be made payable to New Hanover County. If the successful Bidder fails to deliver as indicated in the Invitation to Bid, does not conform to specifications, or fails to perform as agreed upon, the County shall be entitled to retain the deposit to rectify the Bidder's unacceptable performance. The only types of acceptable surety will be:
 - 1. Bid Bond signed by a surety company authorized to do business in the State of North Carolina.
 - 2. Cashier check.
 - 3. Certified check drawn on a responsible financial institution.
 - 4. U.S. Postal Money Order.
- (b) The County will return bid guarantees, other than bid bonds, (1) to unsuccessful bidders as soon as practicable after the opening of bids, and (2) to the successful bidder upon execution of

contractual documents and bonds (including any necessary coinsurance or reinsurance agreements), as required by the bid as accepted. If the successful bidder, upon acceptance of its bid by the County within the period specified for acceptance, fails to execute all contractual documents or furnish executed bond(s) within 7 days after receipt of the forms by the bidder, the County may terminate the contract for default. In the event the contract is terminated for default, the bidder is liable for any cost of acquiring the work that exceeds the amount of its bid, and the bid guarantee is available to offset the difference.

7. SUBCONTRACTORS

- (a) If the Bidder subcontracts any portion of the Project for any reason, then the Bidder must submit the list of Subcontractors, which will become a part of the Contract Documents. Subcontractors listed shall be properly certified or licensed with the State of North Carolina and shall be qualified both technically and financially to perform the Work. The County reserves the right to reject at any time any subcontractor which is deemed unacceptable technically or financially, or which has previously performed unsatisfactory work for the County.
- (a) The Bidder shall not replace or substitute any of the listed subcontractors without written approval from the County. The Bidder must observe industry standards and ethics when proposing individuals currently utilized on other projects. The County's acceptance of any substituted subcontractor may be revoked on the basis of reasonable objection after due investigation, in which case the bidder shall submit an acceptable substitute. No acceptance by the County of any such subcontractor shall constitute a waiver of any right of the County to reject defective work.

8. CONTRACT AWARD

- (a) The County will evaluate bids in response to this solicitation without discussions and will award a contract to the responsible bidder whose bid, conforming to the solicitation, will be most advantageous to the County, considering price, schedule and other factors specified elsewhere in the solicitation. In evaluating the Bids, the County shall consider the qualifications of the bidders, whether or not the Bids comply with the prescribed requirements. The County may conduct such investigations as deemed necessary to establish the responsibility, qualifications and financial ability of the Bidders, proposed Subcontractors and other persons and organizations to do the work in accordance with the Contract Documents to the County's satisfaction within the prescribed time. Before a Bid is considered for award the Bidder may be requested to submit a statement regarding his previous experience in performing comparable work, his business and technical organization, financial resources and physical plant availability. The Bidder shall be required to show evidence of capability to complete all work prior to March 30, 2017. The County reserves the right to reject the Bid of any Bidder who does not pass such evaluation to the County's satisfaction.
- (b) The County may reject any or all bids, and waive informalities or minor irregularities in bids received.
- (c) The County may reject a bid as nonresponsive if the prices bid are materially unbalanced between line items or subline items. A bid is materially unbalanced when it is based on significantly less than cost for some work and prices which are significantly overstated in relation to cost for other work, and if there is a reasonable doubt that the bid will result in the lowest overall cost to the County even though it may be the low evaluated bid, or if it is so unbalanced as to be tantamount to allowing an advance payment.
- (d) All Bids shall remain open for forty-five (45) days after the day of the Bid opening, but the County may, in its sole discretion, release any Bid and return the Bid Security prior to that date. The County intends to award the contract by November 14, 2016.
- (e) Simultaneously with delivery of the executed counterparts of the Agreement to the County, Contractor shall deliver the required Performance and Payment Bonds.
- (f) Schedule of pertinent contracting dates follows:

Advertisement	October 21, 2016
Pre-bid Meeting	October 31, 2016 @ 2:00 PM Gahagan & Bryant Associates of NC, PLLC 295 A North Green Meadows Drive Wilmington, NC 28405
Prequalification Application Deadline	November 4, 2016
Deadline for Questions	November 2, 2016
Response to questions on or before	November 3, 2016
Deadline for Receipt of Bids	November 9, 2016 @ 3:00 pm EST (Bid opening to be held) New Hanover County Government Complex Suite 601-Lucy Harrell Conference Room 230 Government Center Drive Wilmington, NC 28403
Tentative Date for Award of Bid	November 14, 2016

9. PROTEST PROCEDURES

Any qualified Bidder may file a written protest with the County following current County protest policy procedures.

10. TYPE OF CONTRACT

The County contemplates award of a firm fixed-price contract resulting from this solicitation.

11. CONTRACT DOCUMENTS

It is the intent of the Specifications and Drawings to describe a complete Project to be constructed in accordance with the Contract Documents. The Contract Documents comprise the entire Agreement between the County and Contractor. They may be altered only by a Modification.

The Contract Documents are complementary; what is called for by one is as binding as if called for by all. If Contractor finds a conflict, error or discrepancy in the Contract Documents, he shall call it to Engineer's attention in writing at once and before proceeding with the Work affected thereby; however, he shall not be liable to the County or Engineer for his failure to discover any conflict, error or discrepancy in the Contract Provisions, Technical Specifications and Drawings. In resolving such conflicts, errors and discrepancies, the documents shall be given precedent in the following order:

- Agreement
- Addenda
- Instructions to Bidders
- Contract Provisions
- Technical Specifications
- Appendices
- Drawings

Figure dimensions on drawings shall govern over scale dimensions, and detailed Drawings shall govern over general Drawings. Any work that may reasonably be inferred from the Contract Provisions, Technical Specifications, Appendices or Drawings as being required to produce the intended result shall be supplied whether or not it is specifically called for. Work, materials or

equipment described in words which so applied have a well-known technical or trade meaning shall be deemed to refer to such recognized standards.

12. SITE VISIT

- (a) Refer to clauses Differing Site Conditions and Site Investigations and Conditions Affecting the Work. Bidders are urged and expected to inspect the site where the work will be performed. No presence on private property is allowed without specific prior permission from the County.
- (b) Site visits may be arranged during normal working hours by contacting:

Name: Clay Bryant
Address: Gahagan & Bryant Associates of NC, PLLC
295-A North Green Meadows Drive,
Wilmington, NC 28405
Telephone: (910) 313-3338
E-mail: cmbryant@gba-inc.com

13. ARITHMETIC DISCREPANCIES

- (a) For the purpose of initial evaluations of bids, the following will be utilized in the resolving of arithmetic discrepancies found on the face of bid schedule as submitted by the bidder:
 - (1) Obviously misplaced decimal points will be corrected;
 - (2) Discrepancy between unit price and extended price, the unit price will govern;
 - (3) Apparent errors in extension of unit prices will be corrected; and
 - (4) Apparent errors in addition of lump sum and extended prices will be corrected.
- (b) For the purpose of bid evaluation, the County will proceed on the assumption that the bidder intends the bid to be evaluated on the basis of the unit prices, the totals arrived at by resolution of arithmetic discrepancies as provided above and the bid will be so reflected on the abstract of bids.
- (c) These correction procedures shall not be used to resolve any ambiguity concerning which bid is low.

14. DISTRIBUTING SOLICITATION AMENDMENTS

Any amendments issued against the solicitation will be distributed to all plan holders by one of the following methods:

- (i) If the amendment is substantial enough to require re-issuance of the entire solicitation, a new CD-Rom, with the amendment incorporated, will be sent to all plan holders.
- (ii) If the amendment does not require re-issuance of the CD-Rom, the amendment will be sent via e-mail in PDF format to all plan holders. Copies will not be sent by mail, fax, or delivery service.

15. OBTAINING INFORMATION REGARDING THIS SOLICITATION

Verbal requests for information will not be accepted. Written requests for explanations must be sent to the person below and may be sent via e-mail. Inquiries and requests that are directed to any other person may not be relayed to the proper person and, therefore, may not be answered. All inquiries must be received by November 2, 2016. Responses to inquiries will be at the discretion of the County

and will be provided to all potential bidders as a bid addendum on or before November 3, 2016.

Contact: Layton Bedsole, Shore Protection Coordinator
New Hanover County, Engineering Department
Fax: (910) 798-7051
E-mail: lbedsole@nhcgov.com

16. LEGAL REQUIREMENTS

Federal, State, County and local laws, ordinances, rules and regulations that in any manner affect the items covered herein apply. Lack of knowledge by the bidder will in no way be a cause for relief from responsibility.

- (1) The Contractor shall be in compliance with the federal Drug-Free Workplace Act of 1988 requirements.
- (2) The Uniform Commercial Code (North Carolina General Statutes, Chapter 25) shall prevail as the basis for contractual obligations between the awarded bidder/contractor and the County for any terms and conditions not specifically stated in the Invitation for Bid.
- (3) The obligations of the County under this award are subject to the availability of funds lawfully appropriated for its purpose.
- (4) The Invitation for Bid shall be included and incorporated in the final award. The order of contractual precedence will be the agreement between the Successful Bidder and the County, bid document (original Terms and Conditions), and Successful Bidder's response. Any and all legal action necessary to enforce the award will be held in the District Court located in New Hanover County (District 5), North Carolina, and the contractual obligations will be interpreted according to the laws of North Carolina.

-- End of Section --

SECTION II CONTRACT CLAUSES

1. **CLAUSES INCORPORATED BY REFERENCE**
2. **COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK**
3. **CONTRACT DRAWINGS, MAPS, AND SPECIFICATIONS**
4. **SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION**
5. **POSTAWARD CONFERENCE**
6. **PRECONSTRUCTION CONFERENCE**
7. **PERFORMANCE AND PAYMENT BONDS**
8. **PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS**
9. **CONTRACT PRICES - BID SCHEDULE**
10. **PAYMENT FOR MOBILIZATION AND DEMOBILIZATION**
11. **VARIATION IN ESTIMATED QUANTITY**
12. **PERMITS AND RESPONSIBILITIES**
13. **EQUIPMENT AND WORKMANSHIP**
14. **SUPERINTENDENCE BY THE CONTRACTOR**
15. **SCHEDULES FOR CONSTRUCTION CONTRACTS**
16. **SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK**
17. **PHYSICAL DATA**
18. **DIFFERING SITE CONDITIONS**
19. **CHANGES**
20. **MODIFICATION PROPOSALS-PRICE BREAKDOWN**
21. **REQUESTS FOR EQUITABLE ADJUSTMENT**
22. **DISPUTES**
23. **DEFAULT**
24. **SUSPENSION OF WORK**
25. **OPERATIONS AND STORAGE AREAS**
26. **OBSTRUCTION OF NAVIGABLE WATERWAYS**
27. **PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS**
28. **LAYOUT OF WORK**
29. **QUANTITY SURVEYS**
30. **INSPECTION OF CONSTRUCTION**
31. **USE AND POSSESSION PRIOR TO COMPLETION**
32. **CLEANING UP**
33. **ACCIDENT PREVENTION**
34. **HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA**
35. **HAZARD WARNING LABELS**
36. **DRUG FREE WORK FORCE**
37. **UNAUTHORIZED INSTRUCTIONS FROM COUNTY OR OTHER PERSONNEL**
38. **OTHER CONTRACTS**

1. CLAUSES INCORPORATED BY REFERENCE

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Engineer will make their full text available.

2. COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK

The Contractor shall be required to (a) commence work under this contract within 10 calendar days after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete all work prior to March 30, 2017. Prior to the award of the contract, the Contractor and Engineer will agree upon the commencement, prosecution and completion of the work. The Contractor will be required to meet the agreed upon schedule. The Contractor's dredge plant shall not demobilize to prosecute work on another project without the consent and approval of the Engineer, and the submission of a revised and agreed upon schedule. The time stated for completion shall include final cleanup of the premises. No construction activities shall occur between the dates of April 1st to November 15th; except as authorized by Federal and State permits, as amended. Should the Contractor not complete the required work prior to April 1st, the contractor shall demobilize his equipment, and remobilize after the subsequent November 15th to complete the work, at no additional cost to the County.

3. CONTRACT DRAWINGS, MAPS, AND SPECIFICATIONS

(a) Engineer will provide to the Contractor, without charge, four (4) sets of contract drawings and specifications, except publications incorporated into the technical provisions by reference, in electronic or paper media as chosen by the Engineer.

(b) The Contractor shall--

- (1) Check all drawings furnished immediately upon receipt;
- (2) Compare all drawings and verify the figures before laying out the work;
- (3) Promptly notify the Engineer of any discrepancies;
- (4) Be responsible for any errors that might have been avoided by complying with this paragraph (b); and
- (5) Reproduce and print contract drawings and specifications as needed.

(c) In general--

- (1) Large-scale drawings shall govern small-scale drawings; and
- (2) The Contractor shall follow figures marked on drawings in preference to scale measurements.

(d) Omissions from the drawings or specifications or the misdescription of details of work that are manifestly necessary to carry out the intent of the drawings and specifications, or that are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details of the work. The Contractor shall perform such details as if fully and correctly set forth and described in the drawings and specifications.

(e) The work shall conform to these specifications and the contract drawings identified as follows:

AIWW MAINTENANCE DREDGING PROJECT – MASON CREEK CROSSING

NEW HANOVER COUNTY, NC, dated October 21, 2016, 11 sheets.

4. SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION

- (a) The Contractor shall keep on the work site a copy of the drawings and specifications and shall at all times give the Engineer access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, the specifications shall govern. In case of discrepancy in the figures, in the drawings, or in the specifications, the matter shall be promptly submitted to the Engineer, who shall promptly make a determination in writing. Any adjustment by the Contractor without such a determination shall be at its own risk and expense. The Engineer shall furnish from time to time such detailed drawings and other information as considered necessary, unless otherwise provided.

5. POSTAWARD CONFERENCE

The Contractor agrees to attend any post-award conference convened by the Engineer.

6. PRECONSTRUCTION CONFERENCE

The successful Bidder will be notified of the preconstruction conference and will be required to attend. The Engineer's notification will include specific details regarding the date, time, and location of the conference, any need for attendance by subcontractors, resource agency representatives, and information regarding the items to be discussed.

7. PERFORMANCE AND PAYMENT BONDS

- (a) Definitions. As used in this clause--

Original contract price means the award price of the contract; or, for requirements contracts, the price payable for the estimated total quantity; or, for indefinite-quantity contracts, the price payable for the specified minimum quantity. Original contract price does not include the price of any options, except those options exercised at the time of contract award.

- (b) Amount of required bonds. The successful Bidder shall furnish performance and payment bonds to the County as follows:

- (1) Performance bonds. The penal amount of performance bonds at the time of contract award shall be 100 percent of the original contract price.
- (2) Payment Bonds. The penal amount of payment bonds at the time of contract award shall be 100 percent of the original contract price.

- (c) Furnishing executed bonds. The Contractor shall furnish all executed bonds, including any necessary reinsurance agreements, to the County, within the time period specified in the Bid Guarantee provision of the solicitation, or otherwise specified by the Engineer, but in any event, before starting work. Bond forms are included in Appendix B.
- (d) Surety or other security for bonds. The bonds shall be in the form of firm commitment, supported by corporate sureties whose names appear on the list contained in Treasury Department Circular 570, individual sureties, or by other acceptable security such as postal money order, certified check, or cashier's check.
- (e) Notice of subcontractor waiver of protection (40 U.S.C. 270b(c)). Any waiver of the right to sue on the payment bond is void unless it is in writing, signed by the person whose right is waived, and executed after such person has first furnished labor or material for use in the performance of the contract.

8. PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS

- (a) Payment of price. The County shall pay the Contractor the contract price as provided in this contract.

- (b) Progress payments. The County shall make progress payments monthly as the work proceeds, based on estimates of work accomplished which meets the standards of quality established under the contract, as approved by the Engineer.
- (c) Contractor certification. Along with each request for progress payments, the Contractor shall furnish the following certification, or payment shall not be made: I hereby certify, to the best of my knowledge and belief, that--
 - (1) The amounts requested are only for performance in accordance with the specifications, terms, and conditions of the contract;
 - (2) All payments due to subcontractors and suppliers from previous payments received under the contract have been made, and timely payments will be made from the proceeds of the payment covered by this certification;
 - (3) This request for progress payments does not include any amounts which the prime contractor intends to withhold or retain from a subcontractor or supplier in accordance with the terms and conditions of the subcontract; and

(Name)

(Title)

(Date)

- (d) Retainage. The County shall retain ten percent (5%) of the amount of the payment until final completion and acceptance of the contract work.
- (e) Title, liability, and reservation of rights. All material and work covered by progress payments made shall, at the time of payment, become the sole property of the County, but this shall not be construed as--
 - (1) Relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work; or
 - (2) Waiving the right of the County to require the fulfillment of all of the terms of the contract.
- (f) Final payment. The County shall pay the amount due the Contractor under this contract after--
 - (1) Completion and acceptance of all work;
 - (2) Presentation of a properly executed voucher; and
 - (3) Presentation of release of all claims against the County arising by virtue of this contract, other than claims, in stated amounts, that the Contractor has specifically excepted from the operation of the release.
- (g) Preservation of prime-subcontractor rights. This clause shall not limit or impair any contractual, administrative, or judicial remedies otherwise available to the Contractor or a subcontractor in the event of a dispute involving late payment or nonpayment by the Contractor or deficient subcontract performance or nonperformance by a subcontractor.

9. CONTRACT PRICES - BID SCHEDULE

- (a) The County's payment for the items listed in the Bid Schedule shall constitute full compensation to the Contractor for --
 - (1) Furnishing all plant, labor, equipment, appliances, and materials; and
 - (2) Performing all operations required to complete the work in conformity with the drawings and specifications.

- (b) The Contractor shall include in the prices for the items listed in the Bid Schedule all costs for work in the specifications, whether or not specifically listed in the Bid Schedule.

10. PAYMENT FOR MOBILIZATION AND DEMOBILIZATION

- (a) The County will pay all costs for the mobilization and demobilization of all of the Contractor's plant and equipment at the contract lump sum price for this item.
 - (1) Sixty percent (60%) of the lump sum price upon completion of the contractor's mobilization at the work site and successful dredging and disposal of 3,000 cubic yards.
 - (2) The remaining forty percent (40%) upon completion of demobilization.
- (b) The Engineer may require the Contractor to furnish cost data to justify this portion of the bid if the Engineer believes that the percentages in paragraphs (a) (1) and (2) of this clause do not bear a reasonable relation to the cost of the work in this contract.
 - (1) Failure to justify such price to the satisfaction of the Engineer will result in payment, as determined by the Engineer, of
 - (i) Actual mobilization costs at completion of mobilization;
 - (ii) Actual demobilization costs at completion of demobilization; and
 - (iii) The remainder of this item in the final payment under this contract.
 - (2) The Engineer's determination of the actual costs in paragraph (b)(1) of this clause is not subject to appeal.

11. VARIATION IN ESTIMATED QUANTITY

If the quantity of a unit-priced item in this contract is an estimated quantity and the actual quantity of the unit-priced item varies more than 15 percent above or below the estimated quantity, an equitable adjustment in the contract price shall be made upon demand of either party. The equitable adjustment shall be based upon any increase or decrease in costs due solely to the variation above 115 percent or below 85 percent of the estimated quantity. If the quantity variation is such as to cause an increase in the time necessary for completion, the Contractor may request, in writing, an extension of time, to be received by the Engineer within 7 days from the beginning of the delay, or within such further period as may be granted by the Engineer before the date of final settlement of the contract. Upon the receipt of a written request for an extension, the Engineer shall ascertain the facts and make an adjustment for extending the completion date as, in the judgment of the Engineer, is justified.

12. PERMITS AND RESPONSIBILITIES

The Contractor shall comply with all requirements under the terms and conditions set out in the following permit(s) and authorization(s) listed below. These permit(s) and authorization(s) are included in Appendix D.

- a) North Carolina Department of Environment & Natural resources Permit 151-01 and associated modifications.
- b) US Army Corps of Engineers Action ID #SAW-199901052 and General Permit No.199602878.
- c) North Carolina Division of Water Quality 401 Certification #3274.
- d) US Army Corps of Engineers DA-241 Consent of Use (pending).

The Contractor shall, without additional expense to the County, be responsible for obtaining any necessary licenses and permits in addition to those obtained and provided by the County, and for complying with any Federal, State, and municipal laws, codes, and regulations applicable to the performance of the work. The Contractor shall also be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the contract. All work is to be completed in accordance with these permits and subject to the restrictions thereby.

13. EQUIPMENT AND WORKMANSHIP

- (A) The Contractor shall obtain the Engineer's approval of the machinery and mechanical and other equipment to be incorporated into the work. When requesting approval, the Contractor shall furnish to the Engineer the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the machinery and other equipment. When required by this contract or by the Engineer, the Contractor shall also obtain the Engineer's approval of the material or articles which the Contractor contemplates incorporating into the work. Machinery, equipment, material, and articles that do not have the required approval shall be installed or used at the risk of subsequent rejection.
- (c) All work under this contract shall be performed in a skillful and workmanlike manner. The Engineer may require, in writing, that the Contractor remove from the work any employee the Engineer deems incompetent, careless, or otherwise objectionable.

14. SUPERINTENDENCE BY THE CONTRACTOR

At all times during performance of this contract and until the work is completed and accepted, the Contractor shall directly superintend the work or assign and have on the worksite a competent superintendent who is satisfactory to the Engineer and has authority to act for the Contractor.

The Contractor shall provide Field Management Personnel to perform the functions of Supervisor, Quality Engineer/Inspector, and Safety/Environmental Engineer/Inspector. The Field Management Personnel are required on-site, working on this Contract, every hour/day on which this Contract has active on-going work, unless specifically notified by the Engineer that an individual's attendance would not be required for a specific activity. These personnel must be employees of the Contractor (not its Subcontractor) and shall be dedicated to this Contract during all on-site work activities. Field Management Personnel must be available by VHF marine band radio and a cellular phone during all work periods.

15. SCHEDULES FOR CONSTRUCTION CONTRACTS

- (a) The Contractor shall, within seven days after NTP, prepare and submit to the Engineer for approval three copies of a practicable schedule showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the several salient features of the work (including acquiring materials, plant, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period.
- (b) The Contractor shall enter the actual progress on the chart and deliver three copies of the annotated schedule to the Engineer on a monthly basis. If, in the opinion of the Engineer, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Engineer, without additional cost to the County. In this circumstance, the Engineer may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of construction plant, and to submit for approval any supplementary schedule or schedules in chart form as the Engineer deems necessary to demonstrate how the approved rate of progress will be regained.
- (c) Failure of the Contractor to comply with the requirements of the Engineer under this clause shall be grounds for a determination by the Engineer that the Contractor is not prosecuting the work with sufficient diligence. Upon making this determination, the Engineer may terminate the Contractor's right to proceed with the work, or any separable part of it, in accordance with the default terms of this contract.

16. SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

- (a) The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to

- (1) conditions bearing upon transportation, disposal, site access, handling, and storage of materials;
- (2) the availability of labor, water, sanitation, electric power, and roads;
- (3) uncertainties of weather, river stages, tides, or similar physical conditions at the site;
- (4) the conformation and conditions of the ground; and
- (5) the character of equipment and facilities needed preliminary to and during work performance.

The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the County, as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the County.

- (b) The County assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the County. Nor does the County assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

17. PHYSICAL DATA

Data and information furnished or referred to below are for the Contractor's information. The County shall not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

- (a) The indications of physical conditions on the drawings and in the specifications are the result of site investigations and surveys (See SECTIONS III and V).
- (b) Weather conditions (See SECTION IV).
- (c) Transportation facilities (See SECTION V).

18. DIFFERING SITE CONDITIONS

- (a) The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the Engineer of
 - (1) subsurface or latent physical conditions at the site which differ materially from those indicated in this contract, or
 - (2) unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the contract.
- (b) The Engineer shall investigate the site conditions promptly after receiving the notice. If the conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the work under this contract, whether or not changed as a result of the conditions, an equitable adjustment shall be made under this clause and the contract modified in writing accordingly.
- (c) No request by the Contractor for an equitable adjustment to the contract under this clause shall be allowed, unless the Contractor has given the written notice required; provided, that the time prescribed in (a) above for giving written notice may be extended by the Engineer.
- (d) No request by the Contractor for an equitable adjustment to the contract for differing site conditions shall be allowed if made after final payment under this contract.

19. CHANGES

- (a) The Engineer may, at any time, without notice to the sureties, if any, by written order designated or indicated to be a change order, make changes in the work within the general scope of the contract, including changes--
 - (1) In the specifications (including drawings and designs);
 - (2) In the method or manner of performance of the work;
 - (3) In the County-furnished facilities, equipment, materials, services, or site; or
 - (4) Directing acceleration in the performance of the work.
- (b) Any other written or oral order (which, as used in this paragraph (b), includes direction, instruction, interpretation, or determination) from the Engineer that causes a change shall be treated as a change order under this clause; provided, that the Contractor gives the Engineer written notice stating
 - (1) the date, circumstances, and source of the order and
 - (2) that the Contractor regards the order as a change order.
- (c) Except as provided in this clause, no order, statement, or conduct of the Engineer shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment.
- (d) If any change under this clause causes an increase or decrease in the Contractor's cost of, or the time required for, the performance of any part of the work under this contract, whether or not changed by any such order, the Engineer shall make an equitable adjustment and modify the contract in writing. However, except for an adjustment based on defective specifications, no adjustment for any change under paragraph (b) of this clause shall be made for any costs incurred more than 10 days before the Contractor gives written notice as required. In the case of defective specifications for which the County is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the Contractor in attempting to comply with the defective specifications.
- (e) The Contractor must assert its right to an adjustment under this clause within 10 days after (1) receipt of a written change order under paragraph (a) of this clause or (2) the furnishing of a written notice under paragraph (b) of this clause, by submitting to the Engineer a written statement describing the general nature and amount of the proposal, unless this period is extended by the County. The statement of proposal for adjustment may be included in the notice under paragraph (b) above.
- (f) No proposal by the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this contract.

20. MODIFICATION PROPOSALS - PRICE BREAKDOWN

- (a) The Contractor shall furnish a price breakdown, itemized as required and within the time specified by the Engineer, with any proposal for a contract modification.
- (b) The price breakdown --
 - (1) Must include sufficient detail to permit an analysis of profit, and of all costs for --
 - (i) Material;
 - (ii) Labor;
 - (iii) Equipment;
 - (iv) Subcontracts; and
 - (v) Overhead; and

- (2) Must cover all work involved in the modification, whether the work was deleted, added, or changed.
- (c) The Contractor shall provide similar price breakdowns to support any amounts claimed for subcontracts.
- (d) The Contractor's proposal shall include a justification for any time extension proposed.

21. REQUESTS FOR EQUITABLE ADJUSTMENT

The amount of any request for equitable adjustment to contract terms shall accurately reflect the contract adjustment for which the Contractor believes the County is liable. The request shall include only costs for performing the change, and shall not include any costs that already have been reimbursed or that have been separately claimed. All indirect costs included in the request shall be properly allocable to the change.

22. DISPUTES

- a. General: Any disputes relating to interpretation of the terms of this Contract or a question of fact or arising under this Contract shall be resolved through good faith efforts upon the part of the Contractor and the County. At all times, the Contractor shall carry on the work and maintain its progress schedule in accordance with the requirements of the Contract and the determination of the County or its representatives, pending a final resolution of the dispute, including, if necessary, and determination by a Court of competent jurisdiction. Any dispute, which is not resolved by mutual agreement, shall be decided by the County who shall reduce the decision to writing. The decision of the County shall be final and conclusive unless determined by a court of competent jurisdiction to be fraudulent, capricious, arbitrary, so grossly erroneous as to necessarily imply bad faith, or not be supported by substantial evidence.
- b. Mediation: Prior to initiating any litigation concerning this Contract, the parties agree to submit the disputed issue or issues to a mediator for non-binding mediation. The parties shall agree on a mediator chosen from a list of certified for New Hanover County. The fee of the mediator shall be shared equally by the parties. To the extent allowed by law, the mediation process shall be confidential and the results of the mediation or any testimony or argument introduced at the mediation shall not be admissible as evidence in any subsequent proceeding concerning the disputed issue.
- c. Interpretation Venue: This Contract constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior verbal or written agreements between the parties with respect thereto. This Contract may only be amended by written documents, properly authorized, executed and delivered by both parties hereto. This Contract shall be interpreted as a whole unit and section headings are for convenience only. All interpretations shall be governed by the laws of the State of North Carolina. In the event it is necessary for either party to initiate legal action regarding this Contract, venue shall be exclusively in the District Court located in New Hanover County (District 5), North Carolina, for claims under state law and for any claims which are justifiable in Federal court.

23. DEFAULT

- (a) If the Contractor refuses or fails to prosecute the work or any separable part, with diligence, the County may, by written notice to the Contractor, terminate the right to proceed with the work (or the separable part of the work) that has been delayed. In this event, the County may take over the work and complete it by contract or otherwise, and may take possession of and use any materials, appliances, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the County resulting from the Contractor's refusal or failure to complete the work diligently, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the County in completing the work.

- (b) The Contractor's right to proceed shall not be terminated nor the Contractor charged with damages under this clause, if--
- (1) The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include
 - (i) acts of God or of the public enemy,
 - (ii) acts of the County in either its sovereign or contractual capacity,
 - (iii) acts of another Contractor in the performance of a contract with the County,
 - (iv) fires,
 - (v) floods,
 - (vi) epidemics,
 - (vii) quarantine restrictions,
 - (viii) strikes,
 - (ix) freight embargoes,
 - (x) unusually severe weather, or delays of subcontractors or suppliers at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and the subcontractors or suppliers; and
 - (2) The Contractor, within 5 days from the beginning of any delay (unless extended by the Engineer), notifies the Engineer in writing of the causes of delay. The Engineer shall ascertain the facts and the extent of delay. If, in the judgment of the Engineer, the findings of fact warrant such action, the time for completing the work shall be extended. The findings of the Engineer shall be final and conclusive on the parties, but subject to appeal under the Disputes clause.
- (c) If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been issued for the convenience of the County.

The rights and remedies of the County in this clause are in addition to any other rights and remedies provided by law or under this contract.

24. SUSPENSION OF WORK

- (a) The Engineer may order the Contractor, in writing, to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Engineer determines appropriate for the convenience of the County.
- (1) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of the Engineer in the administration of this contract, or (2) by the Engineer's failure to act within the time specified in this contract (or within a reasonable time if not specified), an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) necessarily caused by the unreasonable suspension, delay, or interruption, and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an equitable adjustment is provided for or excluded under any other term or condition of this contract.
 - (2) A claim under this clause shall not be allowed (1) for any costs incurred more than 10 days before the Contractor shall have notified the Engineer in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order), and (2) unless the claim, in an amount stated, is asserted in writing as soon as practicable

after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

25. OPERATIONS AND STORAGE AREAS

- (a) The Contractor shall confine all operations (including storage of materials) on County premises to areas authorized or approved by the Engineer. The Contractor shall hold and save the County, its officers and agents, and the Engineer, free and harmless from liability of any nature occasioned by the Contractor's performance.
- (b) Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be erected by the Contractor only with the approval of the Engineer and shall be built with labor and materials furnished by the Contractor without expense to the County. The temporary buildings and utilities shall remain the property of the Contractor and shall be removed by the Contractor at its expense upon completion of the work.
- (c) The Contractor shall, under regulations prescribed by the Engineer, use only established roadways, or use temporary roadways constructed by the Contractor when and as authorized by the Engineer. When materials are transported in prosecuting the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any Federal, State, or local law or regulation. When it is necessary to cross curbs or sidewalks, the Contractor shall protect them from damage. The Contractor shall repair or pay for the repair of any damaged curbs, sidewalks, or roads.

26. OBSTRUCTION OF NAVIGABLE WATERWAYS

- (a) The Contractor shall --
 - (1) Promptly recover and remove any material, plant, machinery, or appliance which the contractor loses, dumps, throws overboard, sinks, or misplaces, and which, in the opinion of the Engineer, may be dangerous to or obstruct navigation;
 - (2) Give immediate notice, with description and locations of any such obstructions, to the Engineer; and
 - (3) When required by the Engineer, mark or buoy such obstructions until the same are removed.
- (b) The Engineer may --
 - (1) Remove the obstructions by contract or otherwise should the Contractor refuse, neglect, or delay compliance with paragraph (a) of this clause; and
 - (2) Deduct the cost of removal from any monies due or to become due to the Contractor; or
 - (3) Recover the cost of removal under the Contractor's bond.
- (c) The Contractor's liability for the removal of a vessel wrecked or sunk without fault or negligence is limited to that provided in sections 15, 19, and 20 of the River and Harbor Act of March 3, 1899 (33 U.S.C. 410 et. seq.).

27. PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS

- (a) The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this contract.
- (b) The Contractor shall protect from damage all existing improvements and utilities
 - (1) at or near the work site, and
 - (2) on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. The Contractor shall repair any damage to those facilities, including

those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refuses to repair the damage promptly, the Engineer may have the necessary work performed and charge the cost to the Contractor.

28. LAYOUT OF WORK

The Engineer has established monuments, control data and elevations for the work site(s) as indicated on the contract plans. From the monuments, control data and elevations established by the Engineer, the Contractor shall complete the layout of the work and shall be responsible for all measurements that may be required for the execution of the work to the location and limit marks prescribed in the specifications or on the contract plans, subject to such modifications as the Engineer or County may require to meet changed conditions or as a result of necessary modifications to the contract work.

The Contractor shall lay out its work from Engineer established base lines and bench marks that shall be provided to the Contractor, and shall be responsible for all measurements in connection with the layout. The Contractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to lay out any part of the work. The Contractor shall be responsible for executing the work to the lines and grades that may be established or indicated by the Engineer. The Contractor shall also be responsible for maintaining and preserving all stakes and other marks established by the Engineer until authorized to remove them. If such marks are destroyed by the Contractor or through its negligence before their removal is authorized, the Engineer may replace them and deduct the expense of the replacement from any amounts due or to become due to the Contractor.

29. QUANTITY SURVEYS

- (a) Quantity surveys shall be conducted by the Engineer, and the data derived from these surveys shall be used in computing the quantities of work performed and the actual construction completed and in place.
- (b) The Engineer shall conduct the original and final surveys and make the computations based on them. The Engineer will provide survey data and computations to the Contractor for any periods for which progress payments are requested.

30. INSPECTION OF CONSTRUCTION

- (a) Definition. "Work" includes, but is not limited to, materials, and workmanship.
- (b) The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work performed under the contract conforms to contract requirements. The Contractor shall maintain complete inspection records and make them available to the Engineer. All work shall be conducted under the general direction of the Engineer and is subject to inspection and test at all places and at all reasonable times before acceptance to ensure strict compliance with the terms of the contract.
- (c) Engineer inspections and tests are for the sole benefit of the County and do not--
 - (1) Relieve the Contractor of responsibility for providing adequate quality control measures;
 - (2) Relieve the Contractor of responsibility for damage to or loss of the material before acceptance;
 - (3) Constitute or imply acceptance; or
 - (4) Affect the continuing rights of the County after acceptance of the completed work under paragraph (i) of this section.
- (d) The presence or absence of a County inspector does not relieve the Contractor from any contract requirement, nor is the inspector authorized to change any term or condition of the specification without the Engineer's written authorization.

- (e) The Contractor shall promptly furnish, at no increase in contract price, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Engineer. The County may charge to the Contractor any additional cost of inspection or test when work is not ready at the time specified by the Contractor for inspection or test, or when prior rejection makes reinspection or retest necessary. The County shall perform all inspections and tests in a manner that will not unnecessarily delay the work. Special, full size, and performance tests shall be performed as described in the contract.
- (f) The Contractor shall, without charge, replace or correct work found by the County not to conform to contract requirements, unless in the public interest the County consents to accept the work with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.
- (g) If the Contractor does not promptly replace or correct rejected work, the County may (1) by contract or otherwise, replace or correct the work and charge the cost to the Contractor or (2) terminate for default the Contractor's right to proceed.
- (h) If, before acceptance of the entire work, the County decides to examine already completed work by removing it or tearing it out, the Contractor, on request, shall promptly furnish all necessary facilities, labor, and material. If the work is found to be defective or nonconforming in any material respect due to the fault of the Contractor or its subcontractors, the Contractor shall defray the expenses of the examination and of satisfactory reconstruction. However, if the work is found to meet contract requirements, the Engineer shall make an equitable adjustment for the additional services involved in the examination and reconstruction, including, if completion of the work was thereby delayed, an extension of time.
- (i) Unless otherwise specified in the contract, the County shall accept, as promptly as practicable after completion and inspection, all work required by the contract or that portion of the work the Engineer determines can be accepted separately. Acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, or the County's rights under any warranty or guarantee.

31. USE AND POSSESSION PRIOR TO COMPLETION

- (a) The County shall have the right to take possession of or use any completed or partially completed part of the work. Before taking possession of or using any work, the Engineer shall furnish the Contractor a list of items of work remaining to be performed or corrected on those portions of the work that the County intends to take possession of or use. However, failure of the Engineer to list any item of work shall not relieve the Contractor of responsibility for complying with the terms of the contract. The County's possession or use shall not be deemed an acceptance of any work under the contract.
- (b) While the County has such possession or use, the Contractor shall be relieved of the responsibility for the loss of or damage to the work resulting from the County's possession or use, notwithstanding the terms of the clause in this contract entitled "Permits and Responsibilities." If prior possession or use by the County delays the progress of the work or causes additional expense to the Contractor, an equitable adjustment shall be made in the contract price or the time of completion, and the contract shall be modified in writing accordingly.

32. CLEANING UP

The Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. Before completing the work, the Contractor shall remove from the work and premises any rubbish, tools, equipment, and materials that are not the property of the County. Upon completing the work, the Contractor shall leave the work area in a clean, neat, and orderly condition satisfactory to the Engineer.

33. ACCIDENT PREVENTION

- (a) The Contractor shall provide and maintain work environments and procedures which will

- (1) safeguard the public and County personnel, property, materials, supplies, and equipment exposed to Contractor operations and activities;
 - (2) avoid interruptions of County operations and delays in project completion dates; and
 - (3) control costs in the performance of this contract.
- (b) For these purposes on contracts for construction or dismantling, demolition, or removal of improvements, the Contractor shall-
- (1) Provide appropriate safety barricades, signs, and signal lights;
 - (2) Comply with the standards issued by the Secretary of Labor at 29 CFR Part 1926 and 29 CFR Part 1910; and
 - (3) Ensure that any additional measures the Engineer determines to be reasonably necessary for the purposes are taken.
 - (4) The Contractor shall comply with all pertinent provisions of the latest version of U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, in effect on the date of the solicitation.
- (c) Whenever the Engineer becomes aware of any noncompliance with these requirements or any condition which poses a serious or imminent danger to the health or safety of the public or County personnel, the Engineer shall notify the Contractor orally, with written confirmation, and request immediate initiation of corrective action. This notice, when delivered to the Contractor or the Contractor's representative at the work site, shall be deemed sufficient notice of the noncompliance and that corrective action is required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to promptly take corrective action, the Engineer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall not be entitled to any equitable adjustment of the contract price or extension of the performance schedule on any stop work order issued under this clause.
- (d) The Contractor shall insert this clause, including this paragraph (d), with appropriate changes in the designation of the parties, in subcontracts.

34. HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA

- (a) "Hazardous material", as used in this clause, includes any material defined as hazardous under the latest version of Federal Standard No. 313 (including revisions adopted during the term of the contract).
- (b) The Bidder must list any hazardous material, as defined in paragraph (a) of this clause, to be delivered under this contract (see Note 1 below). The hazardous material shall be properly identified and include any applicable identification number, such as National Stock Number or Special Item Number. This information shall also be included on the Material Safety Data Sheet submitted under this contract. Material Identification No. (If none, insert "None") (See Note 2 below)
- (c) This list must be updated during performance of the contract whenever the Contractor determines that any other material to be delivered under this contract is hazardous.
- (d) The apparently successful Bidder agrees to submit, for each item as required prior to award, a Material Safety Data Sheet, meeting the requirements of 29 CFR 1910.1200(g) and the latest version of Federal Standard No. 313, for all hazardous material identified in paragraph (b) of this clause. Data shall be submitted in accordance with Federal Standard No. 313, whether or not the apparently successful Bidder is the actual manufacturer of these items. Failure to submit the Material Safety Data Sheet prior to award may result in the apparently successful Bidder being considered nonresponsible and ineligible for award.
- (e) If, after award, there is a change in the composition of the item(s) or a revision to Federal Standard No. 313, which renders incomplete or inaccurate the data submitted under paragraph (d) of this clause, the Contractor shall promptly notify the Engineer and resubmit the data.

- (f) Neither the requirements of this clause nor any act or failure to act by the County shall relieve the Contractor of any responsibility or liability for the safety of County, Contractor, or subcontractor personnel or property.
- (g) Nothing contained in this clause shall relieve the Contractor from complying with applicable Federal, State, and local laws, codes, ordinances, and regulations (including the obtaining of licenses and permits) in connection with hazardous material.
- (h) The County's rights in data furnished under this contract with respect to hazardous material are as follows:
 - (1) To use, duplicate and disclose any data to which this clause is applicable. The purposes of this right are to--
 - (i) Apprise personnel of the hazards to which they may be exposed in using, handling, packaging, transporting, or disposing of hazardous materials;
 - (ii) Obtain medical treatment for those affected by the material; and
 - (iii) Have others use, duplicate, and disclose the data for the County for these purposes.
 - (2) To use, duplicate, and disclose data furnished under this clause, in accordance with subparagraph (h)(1) of this clause, in precedence over any other clause of this contract providing for rights in data.
 - (3) The County is not precluded from using similar or identical data acquired from other sources.

Notes:

The phrase "to be delivered under this contract" shall be interpreted to include hazardous materials to be consumed in the performance of the work even though such materials may not be delivered to the County as end items.

The use (or consumption) of some kind of hazardous material is required for the performance of almost every construction (including dredging) contract and in many service contracts. Therefore, the Bidder should not enter "none" without first evaluating the work and making a positive determination that no such materials will be introduced to the job site. If the Bidder is not sure of the identity of hazardous materials that may be used during the performance of the work, the Bidder should enter "unknown at this time." Regardless of the Bidder's entry, the successful Bidder (the Contractor) will be required to submit material safety data sheets prior to introducing any hazardous materials to the job site.

35. HAZARD WARNING LABELS

- (a) "Hazardous material," as used in this clause, is defined in the Hazardous Material Identification and Material Safety Data clause of this contract.
- (b) The Contractor shall label the item package (unit container) of any hazardous material to be delivered under this contract in accordance with the Hazard Communication Standard (29 CFR 1910.1200 et. seq.). The Standard requires that the hazard warning label conform to the requirements of the standard unless the material is otherwise subject to the labeling requirements of one of the following statutes:
 - (1) Federal Insecticide, Fungicide and Rodenticide Act;
 - (2) Federal Food, Drug and Cosmetics Act;
 - (3) Consumer Product Safety Act;
 - (4) Federal Hazardous Substances Act; or
 - (5) Federal Alcohol Administration Act.
- (c) The Bidder shall list which hazardous material listed in the Hazardous Material Identification and Material Safety Data clause of this contract will be labeled in accordance with one of the Acts in paragraphs (b)(1) through (5) of this clause instead of the Hazard Communication Standard. Any

hazardous material not listed will be interpreted to mean that a label is required in accordance with the Hazard Communication Standard.

MATERIAL (If None, Insert "None.") ACT

- (d) The apparently successful Bidder agrees to submit, before award, a copy of the hazard warning label for all hazardous materials not listed in paragraph (c) of this clause. The Bidder shall submit the label with the Material Safety Data Sheet being furnished under the Hazardous Material Identification and Material Safety Data clause of this contract.
- (e) The Contractor shall also comply with MIL-STD-129, Marking for Shipment and Storage (including revisions adopted during the term of this contract).

36. DRUG-FREE WORK FORCE

- (a) Definitions.
 - (1) "Employee in a sensitive position," as used in this clause, means an employee who has been granted access to classified information; or employees in other positions that the Contractor determines involve national security; health or safety, or functions other than the foregoing requiring a high degree of trust and confidence.
 - (2) "Illegal drugs," as used in this clause, means controlled substances included in Schedules I and II, as defined by section 802(6) of title 21 of the United States Code, the possession of which is unlawful under Chapter 13 of that Title. The term "illegal drugs" does not mean the use of a controlled substance pursuant to a valid prescription or other uses authorized by law.
- (b) The Contractor agrees to institute and maintain a program for achieving the objective of a drug-free work force. While this clause defines criteria for such a program, contractors are encouraged to implement alternative approaches comparable to the criteria in paragraph (c) that are designed to achieve the objectives of this clause.
- (c) Contractors shall adopt appropriate personnel procedures to deal with employees who are found to be using drugs illegally. Contractors shall not allow any employee to remain on duty or perform in a sensitive position who is found to use illegal drugs until such times as the Contractor, in accordance with procedures established by the Contractor, determines that the employee may perform in such a position.

37. UNAUTHORIZED INSTRUCTIONS FROM COUNTY OR OTHER PERSONNEL

The Contractor shall not accept any instructions issued by any person, employed by the County or otherwise, other than the Engineer or an authorized representative of the Engineer.

38. OTHER CONTRACTS

The County may undertake or award other contracts for additional work at or near the site of the work under this contract. The Contractor shall fully cooperate with the other contractors and with

County employees and shall carefully adapt scheduling and performing the work under this contract to accommodate the additional work, heeding any direction that may be provided by the Engineer. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor or by County employees.

-- End of Section --

SECTION III GEOTECHNICAL DATA

Surface grab samples were taken along the centerline of the dredging areas in September 2016. The sample locations and the results of geotechnical analyses are shown in the Appendix C. Bidders are expected to examine the site and to make their own evaluation of the materials to be excavated.

-- End of Section ---

SECTION IV WEATHER, WATER STAGES AND TIDE DATA

1. The following water stage, wave, wind, and weather data are provided for inclusion into the subject Plans and Specifications. The following water level datums are provided for information only and are not to be utilized in conjunction with any contract related hydrographic surveying.

a) Water Stages. Water levels in the project area are mainly affected by diurnal tidal fluctuations in the Atlantic Ocean. The project area is also subject to storm surges from hurricanes and tropical storms from June through November. Surges from extratropical storms may affect the area during any time of the year. Normal tidal range is 3.8 feet. Tidal datum utilized for hydrographic surveys and construction is the North American Vertical Datum of 1988 (NAVD88). Local datum relationships are shown below:

- 1.40 feet → Mean High Water (MHW)
- 0.00 feet → NGVD 88
- 2.50 feet → Mean Low Water (MLW) "USACE Beaufort Datum (BFT)"

Daily tidal predictions at locations along the coastline of North and South America, including locations in the vicinity of the project area can be found in the publication East Coast of North and South America Tide Tables, U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), National Ocean Service. In addition to daily tidal predictions, this publication provides mean and spring tide ranges and mean tide levels. Some astronomical data is also included, such as time of sunrise, sunset, moonrise, and moonset. This publication is available through NOAA. Tidal data provided in this publication can also be found at the following NOAA website:

http://co-ops.nos.noaa.gov/tide_predictions.html?gid=152.

- b) Wind and Wave Data.** The following publications include wind and wave information in the vicinity of the project area, and may be ordered directly from the agencies indicated.
2. U.S. Coast Pilot Volume 4, Atlantic Coast: Cape Henry to Key West, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Service. This publication supplements the navigational information shown on the NOAA/NOS nautical charts. It also provides miscellaneous meteorological data. This publication is available through NOAA: <http://www.nauticalcharts.noaa.gov/nsd/coastpilot/archive/4/CP4-42ed-2010-reduced.pdf>.
 3. Hindcast Wave Information for the U.S. Atlantic Coast, Wave Information Studies of U.S. Coastlines, WIS Report 30, Waterways Experiment Station, March 1993. This report presents wave hindcast summaries at various stations located along the east coast of the United States, including several stations located offshore of the southeast North Carolina coastline. Available data includes wave height, period, and direction tables for the 20-year period extending from 1956-75. This report also includes summary wind speed and wind direction tables, summary tables of mean wave heights by month and year, largest wave heights by month and year, and a table of extreme wave events based on data from the 20-year hindcasts. The data contained in this report excludes the effects of tropical disturbances and hurricanes. This publication is available from National Technical Information Service, <http://www.ntis.gov/>. An updated hindcast has been completed for locations along the Atlantic coast of the U.S. for the period extending from 1980-2012. This updated data set includes the effects of tropical disturbances and hurricanes. Time series listings of wave data and some summary information are available at the Wave Information Study website: <http://wis.usace.army.mil/>.
 4. National Data Buoy Center (NDBC) Website. This Internet website provides a wide range of real-time and archived meteorological and oceanographic data collected at offshore and nearshore stations worldwide. Data provided on this website includes wind speed, wind gusts, atmospheric pressure, air temperature, sea temperature, wave height, and wave period. Gage readings are

updated hourly, and archived data is available for most stations. The website address for data relevant to this project site is: <http://www.ndbc.noaa.gov/maps/NorthCarolina.shtml>.

a) Weather Conditions. In common with most Atlantic coastal localities, the area is subject to the effects of northeaster's and hurricanes which produce high winds, waves, above normal tides, and heavy rains. The project area is subject to tropical storms and hurricanes from June through November. The hurricane season historically peaks between August and October. The climate of the area is essentially subtropical, marine, and temperatures below freezing are infrequent. The wet season in the project area is from May through October. Rainfall during these months is closely associated with convective activity. These rainfall events are normally of short duration and amounts are spatially variable. In general, the winter months constitute the dry season. Rainfall during the winter months is usually associated with mid-latitude systems (fronts and low pressure systems) and is distributed in a more spatially uniform pattern. Occasionally, daily rainfall in the dry season can be quite heavy as mid-latitude systems penetrate into North Carolina. Dangerous thunderstorms can occur in this area at any time of the year.

1. It shall be the contractor's responsibility to obtain information concerning weather conditions in the project area. The Contractor shall maintain full-time monitoring of the NOAA marine weather broadcasts, and avail themselves of such other local commercial weather forecasting services as may be available. Weather conditions are reported by the NOAA, Environmental Data Service, Asheville, NC and information about weather conditions is available through the following internet site: <http://www.nws.noaa.gov>. The publication Local Climatological Data - Monthly Summary published by NOAA, Asheville, North Carolina contains climatological and meteorological observations and data relevant to this region. The Annual Summary gives a synopsis of these observations for the period of record. Subscription price and ordering information are available from the National Climatic Data Center, Federal Building, Asheville, North Carolina 28801, and at the following website: <http://www.ncdc.noaa.gov/> .

2. The average number of days in each calendar month with rain equal to, or greater than, 0.1 inches is provided for the project area in the following table. This information is based on data obtained from the NOAA National Weather Service, weather station at Wilmington International Airport. The data represents the period of record from 1981 through 2010.

*Average Number of Days Per Month
With Rainfall > 0.1 Inches*

Gauge Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ILM	4	4	4	3	5	5	8	8	8	4	3	4

-- End of Section --

B. TECHNICAL SPECIFICATIONS

SECTION V

SUMMARY OF WORK

SECTION VI

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DREDGING AND DISPOSAL

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SECTION V SUMMARY OF WORK

1. GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

1.1.1 Project Description

The work includes hydraulic dredging of approximately 75,000 cubic yards of material from the AIWW and the Mason Creek widener with subsequent placement in the upland disposal area DA-241. The work also includes of minor repairs to the existing spillway and monitoring environmental concerns.

1.1.2 Location

The project site is located in New Hanover County, on the east coast of North Carolina. The exact location is shown on the contract drawings. The Mason Creek portion of the project site starts at the confluence of the Atlantic Intracoastal Waterway Beaufort to Cape Fear, Section 3 Tangent 12 in New Hanover County, North Carolina. Mason Creek extends ESE from near Station 85+00 and Red Day Marker "110", to the Colregs Demarcation Line in Mason Inlet.

1.2 COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK

- a. Read this paragraph in conjunction with the Clause COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK.
- b. In addition to the above, the following shall apply: The words "commence work" means "commence dredging."

Prior to commencement of work, the Contractor will meet with the Engineer in order to establish a plan and operating procedures to minimize the impacts of the dredging and placement activities to the environment. All work shall be completed not later than March 30, 2017. No work shall take place during the period of April 1st through November 15th. No construction activity or equipment shall be allowed on the jobsite during this period.

1.3 PHYSICAL DATA

Read this paragraph in conjunction with the Clause PHYSICAL DATA.

1.3.1 Physical Conditions

The indications of physical conditions on the drawings and in the specifications are the result of site investigations by surveys and by sediment grab samples. The indicated physical conditions are the result of site investigations by grab samples, the logs and laboratory data are referenced in SECTION III GEOTECHNICAL DATA. While the samples are representative of surface conditions at their respective locations, local variations characteristic of the shoaled materials of this region are to be expected.

The materials to be excavated are predominantly shoaled deposits that have formed since the areas were last dredged during January – March 2016. Historically the average grain size for maintenance material in AIWW and Mason Creek has been approximately 0.20-0.26 mm with a mix of clean sand and fine shell hash. In addition, debris commonly found abandoned or deposited by storms in a channel – i.e., tires, ropes, roots, pilings, etc. – are to be expected. Removal and disposal of common debris shall be at the contractor's expense. In situ rock, if

encountered, will not be dredged.

1.3.2 Weather, Water Stage and Tide Data

See SECTION IV WEATHER, WATER STAGES AND TIDE DATA.

1.3.3 Surveys

The hydrographic and disposal area survey data shown on the drawings are considered representative of the conditions at the time of the surveys. Variations since that time are to be expected.

1.3.4 Contractor Investigation

Refer to the Clause SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK.

1.3.5 Transportation Facilities and Staging Areas

The project area is served by US Highway 74 (Eastwood Road) and US Highway 17, Porter's Neck Road. Dredge and barge access is via the AIWW. Contractor shall identify marine access routes to the site and verify that his plant can navigate within the limited depths and strong currents.

The Contractor shall make his own investigation of available roads for transportation, the location of off-site staging area for delivery and equipment trucks, load limits for bridges and roads, and other road conditions affecting the transportation of materials and equipment to the site.

1.3.6 Maritime Traffic and Obstruction of Navigable Waters

Marine traffic in the project area consists of commercial, pleasure, and small recreational vessels of all types and sizes which can be accommodated by existing depths. The County will not be held responsible for keeping channels free from vessels or other obstructions. Upon completion of the work the Contractor shall promptly remove its plant, including ranges, buoys, piles, and other marks placed by him under the contract in navigable waters or on shore.

1.4 LAYOUT OF WORK

Read this paragraph in conjunction with the Clause LAYOUT OF WORK.

1.4.1 Project Datum and Survey Control Monuments

All work shall be completed to the depths and grades shown on the plans referenced to the MLW Beaufort datum. The vertical control monument used to reference the hydrographic survey and project datum is SATELITE, located in the dune behind the washrooms at Wrightsville Beach Public Access #2. The monument is a brass disk referenced at EL. + 17.98 feet MLW.

The Engineer will establish monuments, control data and elevations for the work as indicated on the contract drawings, which will be provided to the Contractor prior to NTP.

1.4.2 Layout

From the monuments, control data and elevations established by the Engineer, the Contractor shall complete the layout of the work and shall be responsible for all measurements that may be required for the execution of the work to the location and limit marks prescribed in the specifications or on the contract drawings, subject to such modifications as the Engineer may

require to meet changed conditions or as a result of necessary modifications to the contract work.

1.4.3 Survey

The Contractor shall furnish, at his own expense, such gauges, stakes, templates, platforms, equipment, tools and material, and all labor as may be required in laying out any part of the work from the monuments, control data and elevations established by the Engineer. It shall be the responsibility of the Contractor to maintain and preserve all stakes and other marks established by the Engineer until authorized to remove them, and if such marks are destroyed by the Contractor or through his negligence, prior to their authorized removal, they may be replaced by the Engineer, at his discretion, and the expense of replacement will be deducted from any amounts due or to become due the Contractor. The Engineer may require that work be suspended at any time when location and limit marks established by the Contractor are not reasonably adequate to permit checking of the work.

1.5 DAMAGE TO WORK

The responsibility for damage to any part of the permanent work shall be as set forth in Clause PERMITS AND RESPONSIBILITIES. However, if, in the judgment of the Engineer, any part of the permanent work performed by the Contractor is damaged by flood, earthquake, hurricane, or tornado, which damage is not due to the failure of the Contractor to take reasonable precautions or to exercise sound engineering and construction practices in the conduct of the work, the Contractor will make the repairs as ordered by the Engineer and full compensation for such repairs will be made at the applicable contract unit or lump sum prices as fixed and established in the contract. If, in the opinion of the Engineer, there are no contract unit or lump sum prices applicable to any part of such work, an equitable adjustment pursuant to Clause CHANGES will be made as full compensation for the repairs of that part of the permanent work for which there are no applicable contract unit or lump sum prices. Except as herein provided, damage to all work (including temporary construction), utilities, materials, equipment and plant shall be repaired to the satisfaction of the Engineer at the Contractor's expense, regardless of the cause of such damage.

1.6 EXISTING WORK

In addition to the Clause PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS:

- a. Remove or alter existing work in such a manner as to prevent injury or damage to any portions of the existing work which remain.
- b. Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as approved by the Engineer. At the completion of operations, existing work shall be in a condition equal to or better than that which existed before new work started.

1.7 LOCATION OF UNDERGROUND UTILITIES

Notify the Engineer at least 7 days prior to any dredging or excavation work. Contact North Carolina 811, call 811, (www.nc811.org) at least 7 days prior to excavating for identification and locations of underground utilities. Contractor is responsible for marking all utilities not marked by the utility companies.

The Contractor shall be responsible for verifying the locations and depths of any subaqueous utility crossings and take precautions against damages which might result from its operations, especially the sinking of dredge spuds and/or anchors into the channel bottom, in the vicinity of utility crossings. If any damage occurs as a result of its operations, the Contractor will be required to suspend dredging until the damage is repaired and approved by the County. Costs of such repairs and downtime of the dredge and attendant shall be at the Contractor's expense.-- End of Section --

SECTION VI MEASUREMENT AND PAYMENT

1. GENERAL

1.1 SUMMARY

This section describes how Line Items will be measured and paid for when making progress payments. Work to be measured is described in specification sections listed for each Line Item. Measurement procedures for payment, required quantity survey or procurement documentation and payment restrictions are described in applicable specification sections. Allocate costs for work not specifically mentioned to the Line Item most closely associated with work involved. Unless there is a specific Line Item for administrative costs, allocate such costs proportionally across all Line Items.

1.2 LUMP SUM PAYMENT ITEMS

Payment items for the work of this contract for which contract lump sum payments will be made are listed in the LINE ITEMS AND PRICING SCHEDULE and described below. All costs for items of work, which are not specifically mentioned to be included in a particular lump sum or unit price payment item, shall be included in the listed lump sum item most closely associated with the work involved. The lump sum price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for which separate payment is not otherwise provided.

Progress payments for lump sum line items will be made in accordance with the PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS Clause.

1.2.1 Mobilization and Demobilization (Line Item 1)

- a. Payment will be made for costs associated with or incidental to mobilization and demobilization and establishment of initial project management and coordination. See Clause PAYMENT FOR MOBILIZATION AND DEMOBILIZATION.

1.3 UNIT PRICE PAYMENT ITEMS

Payment items for the work of this contract on which the contract unit price payments will be made are listed in the LINE ITEMS AND PRICING SCHEDULE and described below. The unit price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for each of the unit price items in accordance with the Contract Documents and all applicable Federal, State, and Local permits.

Each Unit Price Line Item may be a single pay activity item or may be broken down into pay activities with smaller quantities equal to the line item total. Contract unit price multiplied by agreed quantity is full compensation.

1.3.2 DREDGING AND DISPOSAL (Line Item 2)

1.3.2.1 Payment

- a. Payment will be made for costs associated with or incidental to dredging, transportation and placement of dredged materials in the disposal area. No separate payment will be made for incidental items including, but not limited to: all temporary

construction facilities, barricades and signs, debris removal, rock removal/disposal, pipeline crossing, excavation, spillway structure repairs, spillway operations, final dressing and cleanup, noise control, and environmental monitoring. See SECTION X ENVIRONMENTAL PROTECTION, and SECTION XI DREDGING AND DISPOSAL.

- b. Payment will be made for all material dredged within the template limits shown on the drawings, down to 2.0 foot overdepth, on both the bottom and side slopes. Payment quantities will be determined by the Engineer using average end area method of calculation. Material removed below the 2.0 foot overdepth limit will not be paid for.

1.3.2.2 Measurement

- a. The material satisfactorily dredged from within the required template plus overdepth will be measured for payment. The drawings are believed to represent accurately the existing conditions at the time the surveys were performed, but changes are expected to have occurred since. The Engineer will perform pre-dredge surveys of the areas to be dredged for the purpose of quantity calculations. Prior to the start of dredging operations, the Contractor shall propose Acceptance Sections of not less than 500 feet in length along the centerline of the AIWW, in accordance with his proposed dredge cut. The entire Mason Creek Widener shall be a separate Acceptance Section. The Acceptance Sections shall be subject to approval by the Engineer.

Measurement of the quantity dredged for pay purposes will be based on original and final cross sections at 100-foot stations made within the Acceptance Sections. Pre- and post-dredge cross-section surveys for payment will be conducted by the Engineer. Quality Control Surveys shall be the responsibility of the Contractor. Monthly partial payments will be based on approximate quantities determined by measurement of the material removed from within the required template plus allowable overdepth. Once quantities and acceptance within a specified Acceptance Section have been determined through the use of post-dredge surveys, they will not be reopened except on evidence of collusion, fraud, or obvious error.

1.3.2.3 Unit of Measure

Cubic yard.

2. EXECUTION

2.1 PAYMENT PROCEDURES

Progress payment requests shall be submitted to the Engineer for approval and subsequent payment by the County. The Contractor shall provide hard copies of supporting invoices and quantity measurements to support all requested earnings along with digital data files of supporting surveys, drawings, and calculations.

-- End of Section --

SECTION VII ADMINISTRATIVE PROCEDURES

1. GENERAL

1.1 SUMMARY

The Contractor shall manage the project and coordinate activities of its own employees, subcontractors, suppliers and offsite fabricators. The Contractor shall use computers, e-mail, and internet resources for administrative work. The Contractor shall notify Engineer of important meetings, scheduled events and activities. The Contractor shall furnish labor and materials and equipment required to plan and execute project management functions and coordination. The Contractor shall coordinate activities and manage resources to construct the project diligently, conforming to the contract, and within budget.

1.2 SUBMITTALS

Bring the following administrative submittal items to the Preconstruction Conference:

Preconstruction Submittals

List of Subcontractors

Submit a list of proposed subcontractors with company name, person to contact, street address, mail address, phone number, type of specialty and estimated subcontract quote.

Signature Authority

Furnish a power of attorney or a notarized letter of authority from Contractor identifying local representatives authorized to sign contract documents.

Drug-Free Work Place Record

Documentation of compliance with Clause DRUG-FREE WORK FORCE (see subparagraphs (b)(1) through (b)(7)).

1.3 PROJECT COORDINATION

The Engineer will be the County's representative for this contract.

1.3.1 Access to Others

Maintain access to power poles and other items owned or operated by utility companies. Coordinate with utility companies as required for line marking, hookups, and relocations as needed to perform work. Incoming electrical utilities become the responsibility of Contractor at transformers. Coordinate emergency incident response with local law enforcement and fire rescue authorities. Notify Engineer in writing of coordination problems encountered affecting work.

1.4 PROJECT MEETINGS

The Engineer requires the following types of project meetings:

- Preconstruction Conference
- Project Progress Meetings

Project meetings are described in detail in subparts below.

1.5 PRECONSTRUCTION CONFERENCE

Engineer will conduct a Preconstruction Conference for this project in accordance with Clause PRECONSTRUCTION CONFERENCE. Preconstruction Conference will be after Notice of Award (NOA) but prior to Notice to Proceed (NTP). (Refer to subparagraph "Preconstruction Conference Submittals" below.) The Engineer will notify Contractor of time, place, and agenda. Contractor shall notify key subcontractors and suppliers to attend. The Engineer will discuss contract "ground rules" and general issues including:

- Lines of Engineer authority
- Lines of Contractor authority
- Contract Provisions
- Technical Specifications
- Special Contract Requirements
- Contract Administration
- Progress Payments
- Correspondence Procedures
- Project Schedule
- Submittal List
- General Site Safety

1.5.1 Preconstruction Conference Minutes

The Engineer will take detailed minutes of the Preconstruction Conference discussions and may use an audio or videotape. Copies of typed minutes will be provided to the Contractor to review for accuracy, sign and return. Signed minutes become part of the contract file. Audio or videotapes if used will be made available for Contractor to review or copy.

1.5.2 Preconstruction Conference Submittals

The timing of submission of submittals and completion of the Preconstruction Conference is intended to allow the Contractor and the County adequate time to prepare for commencement of work. However, should the Contractor fail to submit required items within the times stated, the Engineer may issue NTP prior to receipt of submittals and prior to the Preconstruction Conference. If NTP is issued prior to the Contractor's compliance with submittal requirements and prior to the Preconstruction Conference, the Contractor will not be permitted to commence work until these requirements have been satisfied. Any delays attributable to the Contractor's failure to comply with these pre-work requirements shall be at the Contractor's expense and may be cause for remedial action by the Engineer. Submittals required by this Section are described in paragraph SUBMITTALS above.

1.5.2.1 Other Submittals

In addition to the above, bring listed submittals in draft form to Preconstruction Conference:

- Project Schedule - See SECTION VIII PROJECT SCHEDULE
- Temporary Facilities Plan - See SECTION IX TEMPORARY CONSTRUCTION FACILITIES
- Submittal List

1.6 NOTICE TO PROCEED

Notice to Proceed (NTP) will be issued shortly after completion of the preconstruction conference. If the Contractor has failed to submit specified plans, including, but not limited to, the Environmental Protection Plan – SECTION X ENVIRONMENTAL PROTECTION, or has not yet received the Engineer's conditional approval to work under an interim plan, the Contractor shall not proceed with the work and shall consider the work to be suspended in accordance with the Suspension Of Work clause of the contract. While the Contractor is working under a conditionally accepted interim plan, funds may be retained from progress payments in accordance with the Payments Under Fixed-Price Construction Contracts clause of this contract until such time as the Contractor submits an acceptable plan. If the Contractor does not submit an acceptable plan within a reasonable time, as determined by the Engineer, the Engineer may order the Contractor to suspend work. Any suspension order issued for the Contractor's failure to submit an acceptable plan will not constitute unreasonable delay under the Suspension Of Work clause and the Contractor will not be entitled to an equitable adjustment of either performance period or contract price.

1.7 PROGRESS MEETINGS

Schedule, convene and preside over progress meetings as required. As project activities increase ("ramp up"), a minimum of one progress meeting per week is typical of a project of this scope. Convene additional meetings as required, or when requested by Engineer. Notify persons needed to be present to discuss agenda issues. Engineer may direct attendance by key Contractor suppliers, or subcontractors as needed. The Contractor shall take minutes of the meetings and distribute copies of the minutes within three working days after the meetings.

-- End of Section --

SECTION VIII PROJECT SCHEDULE

1. GENERAL

1.1 SUBMITTALS

The following shall be submitted to the Engineer:

Preconstruction Submittals

Initial Project Schedule (IPS)

The IPS as defined below, shall be submitted at the Preconstruction Conference.

Progress Submittals

Periodic Schedule Updates

The Project Schedule (PS) shall be updated as specified below and shall be submitted as part of the Contractor's period request for payment.

2. EXECUTION

2.1 GENERAL REQUIREMENTS

Pursuant to the Clause SCHEDULES FOR CONSTRUCTION CONTRACTS, a Project Schedule as described below shall be prepared. The scheduling of construction shall be the responsibility of the Contractor. Contractor management personnel shall actively participate in its development. Subcontractors and suppliers working on the project shall also contribute in developing and maintaining an accurate Project Schedule. The approved Project Schedule shall be used to measure the progress of the work, and to aid in evaluating time requirements, and to coordinate other activities of interest to the County.

2.2 PROJECT SCHEDULE

Prepare and submit to the Engineer a construction schedule in the form of a progress chart in accordance with the terms in Clause SCHEDULES FOR CONSTRUCTION CONTRACTS, except as modified in this contract. The Contractor shall indicate on the progress chart the anticipated construction duration at each proposed subline location, and breakdown the anticipated construction times on each dredging reach. In addition to the projected fill progress, the project schedule should include any incidental activities that may affect the project or other County business, including scheduled deliveries, commencement or termination of use of identified access areas, scheduled inspections or visitations, any activity that disrupts traffic, etc.

The computer software system utilized by the Contractor to produce the Project Schedule shall be capable of providing all requirements of this specification.

2.2.2 Level of Detail Required

The Project Schedule shall include an appropriate level of detail. The schedule shall contain, but is not limited to, the following conditions to determine the appropriate level of detail to be used:

2.2.2.1 Activity Durations

Contractor submissions shall indicate anticipated activity durations.

2.2.3 Scheduled Project Completion

The schedule interval shall extend from NTP to the contract completion date.

2.3 PROJECT SCHEDULE SUBMISSIONS

The Contractor shall provide the submissions as described below.

2.3.1 Initial Project Schedule Submission

The Initial Project Schedule shall be submitted for approval within 7 calendar days after date of receipt of NTP. The schedule shall provide a reasonable sequence of activities which represent work through the entire project and shall be at a reasonable level of detail.

2.3.2 Periodic Schedule Updates

Based on the result of progress meetings, specified in paragraph PERIODIC PROGRESS MEETINGS below, the Contractor shall submit periodic schedule updates. These submissions shall enable the Engineer to assess Contractor's progress and to coordinate any project activities with the County.

2.4 PERIODIC PROGRESS MEETINGS

Progress meetings to discuss payment shall include a monthly on-site meeting or other regular intervals mutually agreed to by the Engineer and Contractor. During this meeting the Contractor shall describe, on an activity by activity basis, all proposed revisions and adjustments to the Project Schedule required to reflect the current status of the project.

-- End of Section --

SECTION IX TEMPORARY CONSTRUCTION FACILITIES

1. GENERAL

1.1 SUMMARY

In addition to Construction Facilities this Section covers:

- Temporary Utilities
- Construction Aids
- Vehicular Access and Parking
- Project Identification
- Staging Areas

See SECTION X ENVIRONMENTAL PROTECTION for requirements including silt control, trailer placement, fueling restrictions, dust control, solid waste, and cleanup. Upon completion of project, clean up and restore area in accordance with Clause CLEANING UP.

a. Construction Facilities include, but are not limited to, the following:

- (1) Contractor Offices
- (2) Information Bulletin Board
- (3) Material and Equipment Storage Area
- (4) Fueling Area
- (5) Secured Storage Area
- (6) Employee Parking Area
- (7) Debris Container (dumpster)

b. Temporary Utilities include, but are not limited to, the following:

- (1) Water
- (2) Electric
- (3) Sewage
- (4) Communications
- (5) Lighting

1.2 REFERENCES

The publications listed below form a part of this specification to extent referenced. The publications are referred to in text by basic designation only.

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

IEEE C2 (2007) National Electrical Safety Code

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70 (2011) National Electrical Code

U.S. ARMY CORPS OF ENGINEERS (USACE)

COE EM 385-1-1 (2014) Safety and Health Requirements Manual

1.3 SUBMITTALS

Within 7 days following date of receipt of Notice to Proceed and prior to mobilization to site submit the following:

Preconstruction Submittals

Mobilization/Demobilization Plan

Plan shall include, but not be limited to, the following:

- a. Mobilization Requirements:
 - (1) Methods, equipment and materials
 - (2) Connection of utilities
 - (3) Placement of site facilities and temporary controls
 - (4) Construction of facilities
 - (5) Location of staging area of floating plant and pipeline
- b. Demobilization Requirements (methods, equipment and materials required to clean-up and restore site at project conclusion):
 - (1) Collection, recycle and disposal of solid waste
 - (2) Contract-generated material
 - (3) Utility disconnection
 - (4) Removal of Contractor facilities
 - (5) Repair and restoration of site (i.e., fences, roads, vegetation, or permanent facilities)

Shop Drawings

Contractor's Temporary Facilities

General layout sketch of temporary site facilities shall include, but not be limited to, the following:

- a. Trailer locations
- b. Parking areas
- c. Material storage
- d. Equipment lay down area
- e. Areas for gravel or matting
- f. Fuel areas
- g. Supplemental or other staging area
- h. Water supply
- i. Holding tanks, port-a-lets
- j. Contaminated water handling
- k. Fences – type, location, dimensions, entrance and exit points

1.4 EXISTING UTILITIES

There are no existing electric lines, potable water, sanitary sewer, or natural gas connections available at the disposal area. Contractor is responsible for furnishing all needed utilities at the project site.

1.4.1 Water

In addition to the above, the Contractor shall provide and maintain at his own expense an adequate supply of water for his use for personnel and construction, and to install and maintain necessary supply connections and piping for same, but only at such locations and in such manner as may be approved by the Engineer. The Contractor shall also provide and maintain his own temporary toilet and washing facilities. Toilet and washing facilities shall be installed and maintained in a location approved by the Engineer. Refer to paragraph AVAILABILITY AND USE OF UTILITY SERVICES below.

1.4.2 Electricity

In addition to the above, all electric current required by the Contractor shall be furnished at his own expense.

1.5 BRIDGE-TO-BRIDGE COMMUNICATION

In order that radio communication may be made with passing vessels, all dredges/marine equipment engaged in work under this contract shall be equipped with bridge-to-bridge radio telephone equipment. The radio equipment shall operate on a single channel very high frequency (VHF), FM, on a frequency of 156.55 MC per second with low power output having a communication range of approximately ten miles. The frequency has been approved by the Federal Communications Commission. Channels #13 and #16 must be monitored at all times.

2. EXECUTION

2.1 GENERAL REQUIREMENTS

2.1.1 Identification of Employees

The Contractor shall be responsible for furnishing to each employee, and for requiring each employee engaged on the work to display, identification as approved and directed by the Engineer. Prescribed identification shall immediately be delivered to the Engineer for cancellation upon release of any employee. Contractor and subcontractor personnel shall wear identifying markings on hard hats clearly identifying the company for whom the employee works.

2.1.2 Employee Parking

- a. Park employee's vehicles in areas as approved by Engineer. Employee's vehicles shall not be permitted to park in County rights-of-way or other County property without specific permission from the Engineer.
- b. Contractor should protect unattended equipment as it may be subject to vandalism.

2.1.3 Onsite Information

Keep copy of contract drawings, specifications, and other contract documents at Contractor's Office onsite, available for use at all times.

2.2 AVAILABILITY AND USE OF UTILITY SERVICES

Install temporary facilities and utilities in accordance with IEEE C2, NFPA 70, and EM 385-1-1.

2.2.1 Fire Extinguisher

Refer to EM 385-1-1. Non-toxic, dry chemical, fire extinguisher meeting Underwriters Laboratories, Inc., approval for Class A, Class B, and Class C fires with a minimum rating of 2A; 10B; and 10C.

2.2.2 Electric Power

Provide electrical service sufficient to operate heating/air conditioning units. Electrical power shall be purchased or provided directly by Contractor.

2.3 PROTECTION AND MAINTENANCE OF TRAFFIC

The Contractor shall maintain and protect traffic on all affected roads during the construction period except as otherwise specifically directed by the Engineer. Measures for the protection and diversion of traffic, including the provision of watchmen and flagmen, erection of barricades, placing of lights around and in front of equipment and the work, and the erection and maintenance of adequate warning, danger, and direction signs, shall be as required by the State and local authorities having jurisdiction. The traveling public shall be protected from damage to person and property.

The Contractor's traffic on roads selected for hauling material and equipment to and from the site shall interfere as little as possible with public traffic. The Contractor shall investigate the adequacy of existing roads and the allowable load limit on these roads. The Contractor shall be responsible for the repair of any damage to roads caused by construction operations.

2.3.1 Barricades

The Contractor shall erect and maintain temporary barricades to limit public access to hazardous areas. Such barricades shall be required whenever safe public access to paved areas such as roads, parking areas or sidewalks is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic. Barricades shall be securely placed, clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.

2.4 CONTRACTOR'S TEMPORARY FACILITIES

The Contractor's field offices, staging areas, stockpile storage, and temporary buildings shall be placed in areas approved by the Engineer and in accordance with SECTION X ENVIRONMENTAL PROTECTION. Temporary movement or relocation of Contractor facilities shall be made when approved by the Engineer.

2.4.1 Contractor Field Office

Provide field office of sufficient size and staff capability to manage project activities. The Contractor shall locate and obtain satisfactory office space as close as possible to the work site. Provide communications and computer capabilities to manage the work, including facsimile, electronic mail, reproduction, and to track schedule and costs.

2.4.2 Appearance of Trailer(s)

Trailer(s), used for both office and material storage purposes, dump shack, etc. shall be clean, neat exterior appearance and in good repair. Trailer(s) requiring exterior painting or maintenance will not be allowed on site until determined satisfactory by Engineer.

2.4.3 Dump Train Equipment

Dump shack - capable of maintaining internal ambient air temperature of 75 degrees F in 105 degrees F and 70 degrees F in 30 degrees F. Ensure dump shack generators are exhausted

away from dump shack A/C intake. Ensure all generators and motors are electrically grounded. Fuel sled - ensure double containment for fuel tank, and electrically grounded and have fire extinguisher station. Light plants shall be equipped with grounding rods, and light shields.

2.4.4 Waste Storage

Provide dumpsters or suitable debris containers. Prevent windblown trash; cover as needed. Predator-proof trash receptacles must be installed and maintained during all construction activities to minimize the potential for attracting predators of sea turtles, piping plovers and red knots. Dispose of trash offsite when needed. Refer to SECTION X ENVIRONMENTAL PROTECTION.

2.4.5 Fuel Storage and Fueling Operations

Refer to SECTION X ENVIRONMENTAL PROTECTION. Provide light when fueling at night.

2.5 VISITORS

No visitors will be allowed on site without knowledge of Contractor and permission of Engineer. Direct visitors to report upon arrival to Contractor's Field Office for site safety and accident prevention briefing. Provide visitors appropriate protective equipment (i.e., ear plugs, safety glasses, hard hat, etc.).

2.6 ACCOMMODATIONS FOR ENGINEER AND INSPECTORS

- a. The Contractor shall allow access for inspectors on board the dredge and at the disposal area. Bathrooms shall be available for inspectors and other County employees.
- b. The Contractor shall furnish crew boat transportation for Engineer, Inspectors and other County employees as needed. The boat shall be properly outfitted to meet all safety requirements of the U.S. Coast Guard. The Contractor shall also provide an operator who possesses an appropriate U.S. Coast Guard operator's license for carrying passengers on board.

2.7 CLEANUP

Construction debris, waste materials, packaging material and the like shall be removed from the work site daily. Any dirt or mud which is tracked onto paved or surfaced roadways shall be cleaned away. Stored material not in trailers shall be neatly stacked when stored. Refer to SECTION X ENVIRONMENTAL PROTECTION for solid waste and post construction cleanup.

2.8 RESTORATION OF STORAGE AREA

Areas used by the Contractor for the storage of equipment or material, or other use, shall be restored to the original or better condition. Grassed or vegetated areas shall be restored to its original condition, including habitat restoration, planting and seeding as necessary as determined by the Engineer.

-- End of Section --

SECTION X ENVIRONMENTAL PROTECTION

1. GENERAL

1.1 SCOPE

This Section covers prevention of environmental damage as the result of construction operations under this contract and for those measures set forth in other Technical Requirements of these specifications. For the purpose of this specification, environmental damage is defined as the presence of hazardous, physical, chemical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances; affect other species, biological communities, or ecosystems; or degrade the quality of the environment for aesthetic, cultural, and/or historical purposes. The control of environmental damage requires consideration of land, water, and air, and includes management of visual aesthetics, noise, solid waste, radiant energy and radioactive materials, as well as other pollutants.

The Contractor shall minimize environmental pollution and damage that may occur as the result of construction operations. The environmental resources within the project boundaries and those affected outside the limits of permanent work shall be protected during the entire duration of this contract. The Contractor shall comply with all applicable environmental Federal, State, and local laws and regulations. The Contractor shall be responsible for any delays resulting from failure to comply with environmental laws and regulations.

1.2 REFERENCES

1.2.1 Miscellaneous Environmental Laws And Regulations

There are numerous environmental laws and regulations. At the Federal level, the applicable laws and regulations include compliance with the Clean Water Act (CWA); Clean Air Act (CAA); Coastal Zone Management Act (CZMA); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); Endangered Species Act (ESA); Fish and Wildlife Coordination Act (FWCA); Marine Protection, Research, and Sanctuaries Act (MPRSA); Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA); National Environmental Policy Act (NEPA); National Historic Preservation Act (NHPA); National Pollution Discharge Elimination System (NPDES); Research and Sanctuaries Act; Resource Conservation and Recovery Act (RCRA); Rivers and Harbors Act (R&H); Safe Drinking Water Act (SDWA); Toxic Substance Control Act (TSCA); Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA); Marine Mammal Protection Act (MMPA); Code of Federal Regulations (CFRs); Executive Orders; and, Environmental Protection Agency (EPA) requirements. NEPA compliance measures specified in an Environmental Assessment (EA) or Environmental Impact Statements (EIS) are also applicable with regard to compliance.

1.2.2 Publication Reference(s)

The publications listed below forms a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

COE EM 385-1-1 (2014) Safety and Health Requirements Manual

WETLANDS DELINEATION MANUAL (1987) Corps of Engineers Wetlands Delineation Manual
Technical Report Y-87-1 and Atlantic and Gulf Coastal
Plain Region Regional Supplement

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

33 CFR 328	Definitions of Waters of the United States
40 CFR 260	Hazardous Waste Management System:General
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 262	Standards Applicable to Generators of Hazardous Waste
40 CFR 279	Standards for the Management of Used Oil
40 CFR 302	Designation, Reportable Quantities, and Notification
40 CFR 355	Emergency Planning and Notification
40 CFR 68	Chemical Accident Prevention Provisions
49 CFR 171 - 178	Hazardous Materials Regulations

1.3 QUALITY CONTROL

The Contractor shall establish and maintain quality control for environmental protection of all items set forth herein. The Contractor shall record on daily quality control reports or attachments thereto, any problems in complying with laws, regulations and ordinances, and corrective action taken.

1.4 PERMITS AND AUTHORIZATIONS

The Contractor shall obtain all needed permits or licenses other than those listed below. The County will not obtain any additional permits for this project. The Contractor shall be responsible for implementing the terms and requirements of the appropriate permits as needed and for payment of all fees.

In addition to the above, the Contractor shall comply with all requirements under the terms and conditions set out in the following permits obtained by the County and listed below.

- a) North Carolina Department of Environment & Natural resources Permit 151-01 and associated modifications.
- b) US Army Corps of Engineers Action ID #SAW-199901052 and General Permit No. 199602878.
- c) North Carolina Division of Water Quality 401 Certification #3274.
- d) US Army Corps of Engineers DA-241 Consent of Use (pending)

The above permits for the project are presented in Appendix D for the Contractor's information. The Contractor shall obtain and comply with the requirements of all permits or licenses required for construction of this project in accordance with the Clause PERMITS AND RESPONSIBILITIES.

1.5 SUBMITTALS

The following shall be submitted to the Engineer:

Preconstruction Submittals

Environmental Protection Plan

Within 7 calendar days after the date of Notice of Award, the Contractor shall submit an Environmental Protection Plan for review and acceptance by the Engineer. The County will consider an interim plan for the first 7 days of operations. However, the Contractor shall furnish an acceptable final plan no later than 7 calendar days after receipt of Notice to Proceed. Acceptance of the Contractor's plan shall not relieve the Contractor of his responsibility for adequate and continuing control of pollutants and other environmental protection measures. Acceptance of the plan is conditional and predicated on satisfactory performance during construction. The County reserves the right to require the Contractor

to make changes to the Environmental Protection Plan or operations if the Engineer determines that environmental protection requirements are not being met. No physical work at the site shall begin prior to acceptance of the Contractor's plan or an interim plan covering the work to be performed.

No requirement in this Section shall be construed as relieving the Contractor of any applicable Federal, State, and local environmental protection laws and regulations. During Construction, the Contractor shall be responsible for identifying, implementing, and submitting for approval any additional requirements to be included in the Environmental Protection Plan.

The Environmental Protection Plan shall include but not be limited to the following:

- a. Methods for protection of features to be preserved within authorized work areas. The Contractor shall prepare a listing of methods to protect resources needing protection, i.e., trees, shrubs, vines, grasses and ground cover, landscape features, air and water quality, fish and wildlife, soil, historical, archeological, and cultural resources.
- b. Procedures to be implemented to provide the required environmental protection and to comply with the applicable laws and regulations. The Contractor shall provide written assurance that immediate corrective action will be taken to correct pollution of the environment due to accident, natural causes, or failure to follow the procedures set out in accordance with the environmental protection plan.
- c. Drawings showing locations of any proposed temporary excavations or embankments for haul roads, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials.
- d. Environmental monitoring plans for the job site, including land, water, air, and noise monitoring.
- e. Traffic control plans including measures to reduce erosion of temporary roadbeds by construction traffic, especially during wet weather. Plan shall include measures to minimize the amount of sediment or other debris transported onto paved public roads by vehicles or runoff.
- f. Methods of protecting surface and ground water during construction activities.
- g. Spill prevention. The Contractor shall specify all potentially hazardous substances to be used on the job site and intended actions to prevent accidental or intentional introduction of such materials into the air, ground, water, wetlands, or drainage areas. The plan shall specify the Contractor's provisions to be taken to meet Federal, State, and local laws and regulations regarding labeling, storage, removal, transport, and disposal of potentially hazardous substances.
- h. Spill contingency plan for hazardous, toxic, or petroleum material.
- i. Work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. Plan should include measures for marking the limits of use areas.
- j. Plan of dredging areas, and pipeline location and handling plan.
- k. A non-hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including clearing debris. The plan shall include schedules for disposal.

Closeout Submittals

Logs/Final Summary Report

Contractor shall submit as specified, logs and final summary report of sightings and incidents with endangered species.

1.6 SUBCONTRACTORS

Assurance of compliance with this Section by subcontractors shall be the responsibility of the Contractor.

1.7 NOTIFICATION

The Engineer will notify the Contractor in writing of any observed noncompliance with the aforementioned Federal, State, or local laws or regulations, permits and other elements of the Contractor's environmental protection plan. The Contractor shall, after receipt of such notice, inform the Engineer of proposed corrective action and take such action as may be approved. If the Contractor fails to comply promptly, the Engineer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions shall be granted or costs or damages allowed to the Contractor for any such suspension.

1.8 CONTRACTOR PERSONNEL QUALIFICATIONS IN ENVIRONMENTAL PROTECTION

The Contractor's personnel shall be qualified to perform all phases of environmental protection, including methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, and careful installation and monitoring of the project to ensure adequate and continuous environmental pollution control. Quality Control and supervisory personnel shall be thoroughly knowledgeable of Federal, State, and local laws, regulations, and permits as listed in the Environmental Protection Plan submitted by the Contractor.

1.9 PAYMENT

No separate payment to the Contractor shall be made for meeting the requirements of this Section. All costs incidental to satisfying these requirements shall be included in the bid item for DREDGING AND DISPOSAL.

2. EXECUTION

2.1 PROTECTION OF ENVIRONMENTAL RESOURCES

For contract work, the Contractor shall comply with all applicable Federal, State, or local laws and regulations. The environmental resources within the project boundaries and those affected outside the limits of permanent work under this contract shall be protected at least during the entire period of this contract. The Contractor shall confine his activities to areas defined by the drawings and specifications. Environmental protection shall be as stated in the following subparagraphs.

2.1.1 General Project Environmental Design and Installation Criteria

At all sites, the Contractor shall minimize disturbance to existing features at the site to the extent possible, including vegetative, topographic, and drainage pattern features. Wetland impacts and impacts to habitat areas (temporary access, detours, staging areas, and other work area impacts) should be avoided and may require separate permitting action. Any wetlands or habitat areas temporarily impacted shall have its soil and vegetation restored upon project completion. Expansion of previously permitted project footprints may likewise require separate permitting action.

In all cases, the installation of temporary systems to aid construction shall provide for protection

of the environment during handling, installing, storing, utilizing, transporting, servicing, testing, refilling, transferring, pumping, processing, removing waste products, repairing and maintaining systems and their components. Necessary protection shall also be considered that would prevent contamination of the environment from impacts to the systems caused by storm water runoff and flooding. Retrofit of temporary systems on project sites to modern environmental protection design standards shall also be considered. In the event environmental protection measures fail, the Contractor shall implement procedures to control and correct environmental damage.

2.1.1.1 Sewage-Based Systems Environmental Design and Installation Criteria

In general, there shall be no waste or debris discharges of any kind unless authorized by the Engineer. This shall include the Contractor's providing sufficient temporary sanitary equipment and facilities for the project. The design and/or installation of temporary sewage systems shall ensure that waters will be free of effects of sewage discharges. Applicable Federal, State, or local codes and requirements regarding sewage shall be strictly adhered to in the design, such as those of the EPA and Chapter 130A of the General Statutes of North Carolina. Best Management Practices from the applicable agencies shall also be adhered to in the design.

2.1.2 Protection of Land Resources

Prior to the beginning of any construction, the Contractor shall identify all land resources to be preserved or avoided within the Contractor's work area. Materials displaced into uncleared areas shall be removed. The Contractor shall not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and land forms without special permission from the Engineer. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized. Where such special emergency use is permitted, the Contractor shall provide effective protection for land and vegetation resources at all times as defined in the following subparagraphs.

2.1.2.1 Work Area Limits

Prior to any construction, the Contractor shall mark the areas that are not required to accomplish all work to be performed under this contract. Isolated areas within the general work area which are to be saved and protected shall also be marked or fenced. The Contractor shall protect from damage all existing trees designated to remain. Protection of tree roots shall be provided against noxious materials in solution caused by run-off or spillage. Monuments and markers shall be protected before construction operations commence. Where construction operations are to be conducted during darkness, the markers shall be visible. The Contractor shall convey to his personnel the purpose of marking and/or protection of all necessary objects.

2.1.2.2 Contractor Facilities and Other Work Areas

Locate facilities, staging and other work areas as indicated in SECTION IX TEMPORARY CONSTRUCTION FACILITIES, and in compliance with permits listed in the paragraph PERMITS AND AUTHORIZATIONS above and obtained for performance of work. Temporary movement or relocation of Contractor facilities shall be made when approved by the Engineer. Temporary excavation and embankments for plant and/or work areas shall be controlled to protect adjacent areas from despoilment.

2.1.2.3 Solid Wastes

Solid wastes (excluding clearing debris) shall be placed in containers which are emptied on a regular schedule. All handling and disposal shall be conducted to prevent contamination. Solid waste materials shall be hauled to an approved solid waste disposal site. The Contractor shall comply with Federal, State, and local regulations pertaining to the use of the solid waste disposal site.

2.1.2.4 Fuel, Oil, and Lubricants

Fuel, oil, and lubricants shall be managed so as to prevent spills and evaporation. To prevent spills, fuel dispensers shall be double-hulled or have a 4-foot square, 16-gauge metal pan with borders banded up and welded at corners right below the bibb. Edges of the pans shall be 8-inch minimum in depth to ascertain that no contamination of the ground takes place. Pans shall be cleaned by an approved method immediately after every dispensing of fuel and wastes disposed of offsite in an approved area. Should any spilling of fuel occur, the Contractor shall immediately recover the contaminated ground and dispose of it offsite in an approved area. Petroleum waste generated shall be stored in marked corrosion-resistant containers and recycled or disposed of in accordance with 40 CFR 279, State, and local regulations.

2.1.2.5 Hazardous Waste

Hazardous wastes are defined in 40 CFR 261. The Contractor shall ensure that hazardous wastes are stored and disposed of in accordance with 40 CFR 261 and State and local regulations. The Contractor shall ensure that hazardous wastes are packed, labeled, and transported in accordance with 49 CFR 173 and State and local regulations.

2.1.2.6 Hazardous Materials

The Contractor shall ensure that hazardous materials are labeled, stored, and transported in accordance with 49 CFR 173, State, and local regulations.

2.1.2.7 Disposal of Other Materials

Other materials than previously discussed (Construction and Demolition, vegetative waste, etc.) shall be handled as directed.

2.1.3 Preservation and Recovery of Historic, Archeological, and Cultural Resources

2.1.3.1 Applicable Law

A number of Federal laws require protection of cultural resources. Two laws, in particular, can be potentially involved with dredging activities: (1) the National Historic Preservation Act, as amended; and, (2) the Abandoned Shipwreck Act.

2.1.3.2 Known Resources

If known historic, archeological and cultural resources within the Contractor's work area(s) are present, it will be designated as a "potentially significant cultural resource" on the contract drawings or other documents. If so designated, the Contractor shall install protection for these resources and shall be responsible for their preservation during the contract's duration. The Contractor shall not distribute maps or other information on these resource locations except for distribution among the Contractor's staff with a "need to know" technical responsibility for protecting the resources.

2.1.3.3 Inadvertent Discoveries

If, during construction activities, the Contractor observes items that may have historic or archeological value, such observations shall be reported immediately to the Engineer so that a determination for what, if any, additional action is needed. Examples of historic, archeological and cultural resources are bones, remains, artifacts, shell, midden, charcoal or other deposits, rocks or coral, evidences of agricultural or other human activity, alignments, and constructed features. The Contractor shall cease all activities that may result in the destruction of these resources and shall prevent his employees from further removing, or otherwise damaging, such resources.

2.1.3.4 Claims for Downtime due to Inadvertent Discoveries

Upon discovery and subsequent reporting of a possible inadvertent discovery of cultural resources, the Contractor shall seek to continue work well away from, or otherwise protectively avoiding, the area of interest, or in some other manner that strives to continue productive activities in keeping with the contract. Should an inadvertent discovery be of the nature that substantial impact(s) to the work schedule are evident, such delays shall be coordinated with the Engineer. Contract adjustments resulting from compliance with this paragraph shall be determined in accordance with Clause DIFFERING SITE CONDITIONS.

2.1.4 Protection of Water Resources

The Contractor shall keep construction activities under surveillance, management, and control to avoid pollution of surface, ground waters, and wetlands. The Contractor shall plan his operation and perform all work necessary to minimize adverse impact or violation of the water quality standard. Special management techniques as set out below shall be implemented to control water pollution by the listed construction activities which are included in this contract. The Contractor's construction methods shall protect wetland and surface water areas from damage due to mechanical grading, erosion, sedimentation and turbid discharges. There shall be no storage or stockpiling of equipment, tools, or materials within wetlands or along the shoreline within the littoral zone unless specifically authorized.

2.1.4.1 Washing and Curing Water

Waste waters directly derived from construction activities shall not be allowed to enter water areas. These waste waters shall be collected and placed in retention ponds where suspended materials can be settled out or the water evaporates so that pollutants are separated from the water. Analysis shall be performed and results reviewed and approved by Corps Engineer before water in retention ponds is discharged.

2.1.4.2 Monitoring of Water Areas

Monitoring of water areas affected by construction activities shall be the responsibility of the Contractor. All water areas affected by construction activities shall be monitored by the Contractor.

2.1.4.3 Turbidity

The Contractor shall conduct its dredging and disposal operations in a manner to minimize turbidity and shall conform to all water quality standards as prescribed by the North Carolina Coastal Area Management Act (CAMA), Chapter 7H of the North Carolina Administrative Code and the North Carolina Division of Water Quality General Permit to Discharge Sand Dredging Wastewater General Permit No. NC520000 and associated Permits.

2.1.4.4 Oil, Fuel, and Hazardous Substance Spill Prevention and Mitigation

The Contractor shall prevent oil, fuel, or other hazardous substances from entering the air, ground, drainage, local bodies of water, or wetlands. This shall be accomplished by design and procedural controls. In the event that a spill occurs despite the design and procedural controls, the following shall occur:

- (1) Immediate action shall be taken to contain and cleanup any spill of oil, fuel or other hazardous substance.
- (2) Spills shall be immediately reported to the Engineer.
- (3) Spill contingency planning shall be strictly in accordance with the criteria of 40 CFR, Part 109.
- (4) To control the spread of any potential spill, absorbent materials shall be readily

available and capable of absorbing the contents of the single largest tank.

- (5) To control the spread of any potential spill, the Contractor shall provide a written certification of commitment of manpower, equipment, and materials required to expeditiously cleanup and dispose of spill materials.

Spill Preventive Systems: System design and installation requirements have been discussed at the beginning of this Section. Temporary or portable tanks shall conform to applicable Federal, State, and local codes and requirements and shall not be placed where they may be affected by storm, flooding, or washout. Diversionary structures for spills shall be put in place in advance where practical. Both spill preventive systems and any deviations from associated requirements must be approved by the Engineer prior to implementation.

Liabilities: The Contractor shall be liable in the amounts established in 40 CFR, Part 113 when it can be shown that oil was discharged as a result of willful negligence or willful misconduct. The penalty for failure to report the discharge of oil shall be in accordance with the provision of 33 CFR, Part 153.

2.1.5 Protection of Air Resources

The Contractor shall keep construction activities under surveillance, management, and control to minimize pollution of air resources. All activities, equipment, processes and work operated or performed by the Contractor in accomplishing the specified construction shall be in strict accordance with the applicable air pollution standards of the State of North Carolina (North Carolina Administrative Code, Air Quality Rules, 15A NCAC 2D) and all Federal emission and performance laws and standards, including the U.S. Environmental Protection Agency's Ambient Air Quality Standards. Information regarding North Carolina Rules can be obtained from the following web sites:

[http://daq.state.nc.us/;](http://daq.state.nc.us/)

<http://reports.oah.state.nc.us/ncac.asp?folderName=\Title%2015A%20-%20Environment%20and%20Natural%20Resources.>

2.1.5.1 Particulates

Particulates, such as dust, shall be controlled at all times, including weekends, holidays, and hours when work is not in progress. The Contractor shall maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and work areas within or outside the project boundaries free from particulates that would cause air pollution standards to be exceeded or that would cause a hazard or nuisance. The Contractor shall have the necessary equipment and approved methods to control particulates as the work proceeds and before a problem develops.

2.1.5.2 Burning

No burning of debris or vegetation shall be allowed on this project.

2.1.5.3 Odors

Odors shall be controlled at all times for all construction activities.

2.1.6 Protection of Sound Intrusions

The Contractor shall keep construction activities under surveillance and control to minimize damage to the environment by noise. Stationary, land based equipment shall have exhausts directed seaward whenever possible and mufflers shall be utilized.

2.1.7 Protection of Fish and Wildlife Resources

The Contractor shall minimize interference with, disturbance to, and damage to fish, wildlife, and plants including their habitat.

Species federally listed as endangered or threatened receive a high level of protection under the Endangered Species Act of 1973 (PL 93-205), as amended. Endangered or threatened species, including sea turtles, whales, manatees, shortnose and Atlantic sturgeons, and piping plovers may be encountered in the project area during construction of this project. In addition, all marine mammals, including porpoises, and dolphins, are protected under the Marine Mammal Protection Act of 1972 (PL 92-522), as amended. Therefore, the Contractor shall be responsible for the protection of threatened and endangered animal and plant species including their habitat in accordance with Federal, State, Regional, and local laws and regulations. The Contractor shall take such measures as may be required to assure that any activities conducted as a part of this contract do not kill, injure, capture, pursue, harass, or otherwise harm any of these species. Specific types of equipment and operations pose different types of hazards, so specific protective measures will vary depending upon the type of operation being conducted. The Contractor should be aware that protected species frequently occur in North Carolina waters and work should be planned accordingly.

Notification and reporting requirements for incidents involving protected species. Incidents involving the death or injury of any protected species or the recovery of any body parts of these species, including sea turtles (as well as adults, hatchlings, and/or eggs), whales, dolphins, porpoises, and shortnose and Atlantic sturgeons, have specific requirements for agency notification. Any dead, injured, or sick individual of any protected species found in the project area by the Contractor shall be left undisturbed and the Engineer or his/her designated representative shall be notified immediately. The Contractor shall also prepare and provide to the Engineer or his/her designated representative written records detailing any such incident involving protected species within 24 hours of its occurrence.

2.1.7.1 Manatees

The West Indian Manatee may be found in the project area during summer and fall months. The proposed project is proposed to occur outside this time period; therefore compliance with specific avoidance requirements is not necessary. However, the Contractor shall be cognizant that individual manatees may pass through the project area as they return to home waters in Florida, or may be distressed or disoriented and unable to safely return home. The Contractor shall remain alert for the presence of manatees during the life of the contract.

If a manatee is observed, the Contractor shall immediately contact the Contract Officer or his/her designated representative. If a manatee is seen within 300 feet of the dredging operation or vessel movement, all appropriate precautions will be implemented to ensure protection of the manatee. These precautions include the immediate shutdown of moving equipment if a manatee comes within 50 feet of the operation area of the equipment. Activities will not resume until the manatee has departed the project area on its own volition (i.e., it may not be herded or harassed from the area) or has been moved by authorized individuals.

The Contractor is advised that there are civil and criminal penalties for harming, harassing, or killing manatees, which are protected under the Marine Mammal Protection Act and the Endangered Species Act.

2.1.7.2 Migratory Birds and Shorebirds

All construction personnel shall be advised that migratory birds, including the bald eagle, are protected under the Migratory Bird Treaty Act of 1918, as amended. The Contractor shall not harm or harass these birds, their eggs, or their nests as a result of any activities conducted under this contract. If, during any land-based aspects of the project, nesting birds are encountered, the Engineer or his/her designated representative shall be contacted immediately for instructions. Prior to the placement of pipe at the disposal area, the

Contractor shall meet onsite with the Engineer or his/her designated representative and a representative of the North Carolina Wildlife Resources Commission to determine the exact pipeline route so as to minimize impacts to the piping plover and other shorebirds.

2.1.7.3 Avoidance of Marine Mammals

Records shall be kept of the date, time, and approximate location of all marine mammal sightings. Care shall be taken not to closely approach (within 300 feet) any manatees, or other marine mammals during dredging operations or transportation of dredged material. The observer shall serve as a lookout to alert the dredge operator and/or vessel pilot of the occurrence of these animals.

If manatees are observed within 300 feet of the area being dredged, all work shall cease until the animals have left the area. If any marine mammals are observed during other dredging operations/ including vessel movements and transit to the dredged material disposal area, collisions shall be avoided either through reduced vessel speed, course alteration/ or both.

Sightings of manatees or other marine mammals (alive, injured/ or dead) in the work area shall be reported to the Engineer or his/her designated representative as soon as possible.

2.2 POSTCONSTRUCTION CLEANUP

The Contractor shall clean up any area(s) used for construction.

2.3 PRESERVATION AND RESTORATION OF LANDSCAPE AND MARINE VEGETATION DAMAGES

The placement of swing anchors shall be at the minimum distance outside the channel toes to provide for efficient maneuvering of the dredge, and to avoid damage to marsh grasses. The Contractor shall restore all landscape features and marine vegetation damaged or destroyed during construction operations outside the limits of the disposal area. Such restoration shall be a part of the Environmental Protection Plan as defined in subparagraph "Environmental Protection Plan" of paragraph SUBMITTALS above. This work shall be accomplished at the Contractor's expense.

2.4 MAINTENANCE OF POLLUTION CONTROL FACILITIES

The Contractor shall maintain all constructed facilities and pollution control facilities and devices for the duration of the contract or for that length of time construction activities create the particular pollutant.

-- End of Section --

SECTION XI DREDGING AND DISPOSAL

1. GENERAL

1.1. SCOPE

The work covered by this Section consists of furnishing all labor, materials, and equipment, and performing all excavation, transportation, and placement of all shoaled material from the AIWW Section 3 Tangent 12, (Stations 80+00 to 97+00) and the Mason Creek widener (Stations 55+00 to 59+00), to the limits of dredging indicated on the construction plans, and as specified herein. All dredge material within the AIWW and Mason Creek will be excavated by hydraulic cutter suction dredge to the permitted depths and transported through pipelines to the upland disposal area DA-241 shown on the plans.

There are necessary measures for protection of the environment. Environmental protection requirements under this contract are as important to overall completion of work as other technical aspects. Failure to meet the requirements of these specifications for environmental protection may result in work stoppages, or termination for default. No part of the time lost due to any such work stoppages shall be made the subject of claims for extension of time or for excess costs or damages by the Contractor. If the Contractor fails or refuses to promptly repair any damage caused by violation of the provisions of these specifications, the County may have the necessary work performed and charge the cost thereof to the Contractor.

1.2. WORK COVERED BY CONTRACT PRICE

The contract price per cubic yard, as listed for "DREDGING AND DISPOSAL" of the BID SCHEDULE shall include the cost of all plant, material, supplies, labor, and incidental expenses in connection with the excavating, transporting, placing and spreading the dredged material; temporary safety fencing and temporary warning signs; all diking, embankments, and temporary bulkheading needed for control and confining the material and discharge fluid; surveys for the layout and control of the dredging work, and repairs to the existing spillway.

1.3. REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2014) Safety and Health Requirements Manual

EM 1110-2-1003 (2013) Hydrographic Surveying Manual

1.4. SUBMITTALS

The following shall be submitted as indicated:

1.4.1. Pre-Construction Submittals:

Construction Schedule

The Contractor shall submit a fully developed construction schedule within one (1) week after Award. The schedule shall be a bar chart or equivalent type schedule indicating in detail each construction activity and equipment to be utilized. The duration, man loading, and Contractor's dollar value shall be assigned to each activity (which will be used for progress payment analysis/invoice approvals).

Dredging Operations Plan

The Contractor shall prepare and submit for approval a dredging operations plan detailing the dredging sequence and the dredge plant and equipment to be used.

Disposal Area Operations Plan

The Contractor shall prepare and submit for approval a disposal area operations plan detailing the daily site inspection protocols, discharge location plan, and the shore facilities and equipment to be used.

Pipeline Layout Plan

The Contractor shall prepare and submit for approval a pipeline route plan, detailing the locations and method of placement of all dredge discharge pipelines. The plan shall include the method by which the pipeline will be placed to avoid impedance of commercial and recreational marine traffic. The pipeline will be placed to avoid impacts to wetlands, dunes, habitat and vegetation. It is anticipated that the pipeline shall be routed up the unvegetated portion of the disposal area dike as shown on the plans. The pipeline placement must be coordinated with the County, USACE, USFWS, North Carolina Wildlife Resources Commission (NCWRC) and NCDRCM. All easements with private property owners for access or routing shall be the sole responsibility of the Contractor.

Notice of Intent to Dredge

Prior to commencement of work on this contract, the Contractor will be required to notify the Commander, Fifth Coast Guard District of his intent to dredge and request that it be published in the Local Notice to Mariners. This notification must be given in sufficient time so that it appears in the Notice to Mariners at least 20 days prior to the commencement of this operation. A copy of the notification shall be provided to the Engineer.

Notice of Need for Pre-Dredge and Post-Dredge Surveys

The Contractor shall give 48 hours advance notice, in writing, to the Engineer of the need for a pre-dredge or post-dredge survey. The surveys are required for payment and for final acceptance of the project.

Equipment and Performance Data

The Contractor shall furnish proof of electronic positioning equipment calibration to the Engineer.

1.4.2. Construction Submittals:

Daily/Monthly Report of Operations

The Contractor shall prepare and submit via email a copy of the Daily Report of Operations, using a format approved by the Engineer, for each dredge and/or unloader working. This report shall be submitted on a daily basis, by 12:00 noon the following workday, and not in groups (groups = multi-days reports packaged together at one time). In addition to the daily report, the Contractor shall prepare a Monthly Report of Operations for each month or partial month's work. The monthly report shall be submitted on or before the 7th of each month, consolidating the previous month's work. Upon completion of the job, the Contractor shall submit a consolidated job report, combining the monthly reports.

Additionally, one copy of the daily reports shall be maintained by the Contractor on the dredge for inspection purposes. Further instructions on the preparation of the report will be furnished at the Award Conference.

Notice of Misplaced Material

The Contractor shall notify the U.S. Coast Guard Marine Safety Office of any misplaced material as stated in Clause OBSTRUCTION OF NAVIGABLE WATERWAYS.

Notification of Discovery of Historical Period Shipwreck Sites

The Contractor shall immediately notify the Engineer if any shipwreck, artifact, or other objects of antiquity that have scientific or historical value, or are of interest to the public, are discovered, located, and/or recovered.

Declaration of Inspection Stateside

Refer to paragraph FUEL OIL TRANSFER OPERATIONS below for submittal.

1.4.3. Post-Construction Submittals:

Notice of Need for Post-Dredge and Post-Fill Surveys

The Contractor shall give 48 hours advance notice, in writing, to the Engineer of the need for a post-dredge and post-fill survey. The surveys are required for payment and for acceptance of the work.

Consolidated Job Report

Upon completion of the job, the Contractor shall submit a consolidated job report, combining daily reports as discussed under "Daily/Monthly Report of Operations".

Environmental Protection Logs/Final Summary Report

Contractor shall submit as specified logs and final summary report of sightings and incidents with endangered species. Refer to SECTION X ENVIRONMENTAL PROTECTION for more information.

As-Built Contract Plans

The Contractor shall maintain a separate set of full size contract plans, marked up in red, to indicate as built conditions. Each as built contract drawing shall include the Contract Number associated with the contract. These plans shall be maintained in a current condition at all times until completion of the work and shall be available for review by the Engineer and Regulatory Agencies at all times. All variations from the contract plans, for whatever reason, including those occasioned by modifications, optional materials, and the required coordination between trades, shall be indicated. These variations shall be shown in the same general detail utilized in the contract plans. Upon completion of the work, the Contractor shall sign the marked up plans in the following manner: "I CERTIFY THAT THESE CORRECTED PLANS INDICATE CONSTRUCTION AS ACTUALLY PERFORMED AND ARE AN ACCURATE REPRESENTATION OF THE SPECIFIED WORK. THESE CORRECTED PLANS ARE APPROVED FOR PREPARATION OF AS BUILT CONSTRUCTION PLANS." The marked up plans shall then be furnished to the Engineer prior to acceptance of the work. The County reserves the right to withhold final payment until acceptable as built contract plans have been submitted.

1.5. ORDER OF WORK

The Contractor shall begin dredging in the AIWW dredging area and complete the required excavation and obtain acceptance of this area prior to beginning dredging in the Mason Creek widener. The order of work shall be coordinated with the Engineer prior to mobilization and may be altered by the Engineer as needed to provide for protection of property and environment.

No payment will be made for work done in any area designated by the Engineer until the full depth required under the contract is secured in the whole of such area, unless prevented by ledge rock, nor will payment be made for excavation in any area not adjacent to and in prolongation of areas where full depth has been secured, except by decision of the Engineer. Should any such nonadjacent areas be excavated to full depth during the operations carried under the contract, payment for all work therein may be deferred until the required depth has been made in the area intervening. The Contractor may be required to suspend dredging at any time when, for any reason, the gauges or ranges cannot be seen or properly followed.

1.6. PUMPING OF BILGES

Contractors are warned that pumping oil or bilge water containing oil into navigable waters, or into areas which would permit the oil to flow into such waters, is prohibited by Section 13 of the River and Harbor Act of 1899, approved 3 March 1899 (30 Stat. 1152; 33 U.S.C. 407). Violation of this prohibition is subject to penalties provided under the referenced Act.

1.7. HISTORICAL PERIOD SHIPWRECK SITES

If any shipwreck, artifact, or other objects of antiquity that have scientific or historical value, or are of interest to the public, are discovered, located, and/or recovered, the Contractor acknowledges that:

The site(s), articles, or other materials are the property of the State of North Carolina, with title vested in the North Carolina General Statutes, Chapter 121 and that, he shall immediately notify the Engineer.

Refer to subparagraph "Preservation and Recovery of Historic, Archeological, and Cultural Resources" of SECTION X ENVIRONMENTAL PROTECTION.

1.8. FINAL CLEANUP

Final cleanup, as stated in the paragraph COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK, shall include the removal of all of the Contractor's plant and equipment either for disposal or reuse. Plant and/or equipment to be disposed of shall ONLY be disposed of in a manner and at locations approved by the Engineer. The Contractor will not be permitted to abandon pipelines, pipeline supports, pontoons, or other equipment in the disposal area, pipeline access areas, water areas, shore areas, or other areas adjacent to the work site.

1.9. WORK AND ACCESS AREAS

1.9.1. Staging and Access Areas

The limits of the staging and access areas proposed by the Contractor shall be field-determined by the Engineer in coordination with the County and the Contractor. It shall be the responsibility of the Contractor to investigate and obtain any additional areas which may be necessary for his/her construction operations. The additional areas will be subject to the approval of the Engineer.

1.9.2. Contractor Responsibilities

Access to the dredge area is by water only. The Contractor shall be responsible for providing access to the site for their employees and the Engineer when requested. The Contractor shall be responsible for obtaining all necessary permissions for use of landing areas to load and offload its crews.

The Contractor shall exclude the public from the work area in the immediate vicinity of his operations. The Contractor shall install warning signs to warn the public and all commercial recreational boats of all construction activities. The Contractor shall be responsible for providing and maintaining all water and land access routes necessary for his equipment and plant to and from the work sites. The Contractor shall ascertain the environmental conditions which can affect

water and land access, such as climate, terrain, winds, current, waves, swells, depths, shoaling, and scouring tendencies.

1.10. ADJACENT PROPERTY AND STRUCTURES

Any damage to private or public property within the project boundaries, including staging site(s) and work and access areas/roads, shall be repaired promptly by the Contractor. Any damage as a result of the Contractor's operations shall be repaired at his own cost.

1.11. PERMITS AND RESPONSIBILITIES

The Contractor's attention is directed to the Clause PERMITS AND RESPONSIBILITIES and paragraph PERMITS AND AUTHORIZATIONS of SECTION X ENVIRONMENTAL PROTECTION.

1.12. FUEL OIL TRANSFER OPERATIONS

In accordance with U.S. Coast Guard regulations (33 CFR 156.120), couplings used in fuel oil transfer operations on any vessel with a capacity of 250 or more barrels of oil shall be either a bolted or full-threaded connection; or a quick-connect coupling approved by the Commandant; or an automatic back-pressure shutoff nozzle used to fuel the vessel. An executed fuel oil transfer (Declaration) form signed by the tanker operator shall be submitted to the Engineer for each refueling operation. The U.S. Coast Guard shall also be notified prior to any refueling.

1.13. SIGNAL LIGHTS

The Contractor shall display signal lights and conduct operations in accordance with the applicable Coast Guard regulations governing lights and day signals to be displayed by towing vessels with tows on which no signals can be displayed, vessels working on wrecks, dredges, and vessels engaged in laying cables or pipe or in submarine or bank protection operations, lights to be displayed on dredge pipe lines, and day signals to be displayed by vessels of more than 65 feet in length moored or anchored in a fairway or channel, and the passing by other vessels of floating plant working in navigable channels, as set forth in Commandant U.S. Coast Guard Instruction M16672.2, Navigation Rules: International-Inland (COMDTINST M16672.2), or 33 CFR 81 Appendix A (International) and 33 CFR 84 through 33 CFR 89 (Inland) as applicable.

1.14. NOISE CONTROL

All equipment, dredge/barges, boats, and tugs used on this work shall be equipped with satisfactory mufflers or other noise abatement devices. The Contractor shall conduct its operations so as to comply with all federal, state, and local laws pertaining to noise. The use of horns and whistle signals shall be held to the minimum necessary in order to ensure as quiet an operation as possible.

1.15. WORK VIOLATIONS

Work done in violation of these specifications or a verbal or written stop order of the Engineer will be considered as unsatisfactory progress for purposes of progress payments in accordance with Clause PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS.

1.16. COMMUNICATIONS

The Contractor shall furnish and maintain a VHF marine band radio and a cellular phone on the dredge(s) throughout the period of the contract. The plant will not be allowed to begin work until the VHF marine band radio is installed and in good working order and a properly operating cellular phone is on board. The radio shall be capable of operation from the dredge's main control station. Continuous radio contact shall be maintained between the dredge control room and the inspectors of the disposal area as well as the personnel patrolling the pipeline.

2. DREDGING WORK

2.1. NOTIFICATION OF COAST GUARD

2.1.1. Navigation Aids

Navigation aids located within or near the areas required to be dredged will be removed, if necessary, by the U.S. Coast Guard in advance of dredging operations. The Contractor shall not remove, change the location of, obstruct, willfully damage, make fast to, or interfere with any aid to navigation.

2.1.2. Dredging Aids

The Contractor shall obtain approval from the U.S. Coast Guard for all buoys, dredging aid markers to be placed in the water, and dredging aid markers affixed with a light prior to the installation. Dredging aid markers and lights shall not be colored or placed in a manner that they will obstruct or be confused with navigation aids.

2.2. CHARACTER OF MATERIALS

The materials to be excavated are predominantly shoaled deposits that have formed since the areas were last dredged during January – March 2016. Historically the average grain size for maintenance material in the AIWW and Mason Creek has been approximately 0.20-0.26 mm with a mix of clean sand and fine shell hash. In addition, debris commonly found abandoned or deposited by storms in a channel – i.e., tires, ropes, roots, pilings, etc. – are to be expected. Removal and disposal of common debris shall be at the contractor's expense. In situ rock, if encountered, will not be dredged. See SECTION III GEOTECHNICAL DATA.

2.3. DREDGING

2.3.1. Method of Dredging

Only dredging, transport, and placement by a hydraulic pipeline dredge will be allowed under this contract.

The dredge plant shall meet the following minimum size standard:

- A. A minimum 12" diameter suction pipe with a minimum 12" diameter pump discharge.
- B. Proven capacity of the proposed vessel to produce a minimum of 3,000 cy/day under conditions similar to this project, including material type, pipeline length, current and weather conditions.
- C. Floating plant inspection and certification shall comply with paragraph 19.A.01 of USACE EM 385-1-1.

2.3.2. General

All dredging shall be performed within the limits and depths of the areas shown on the drawings. Existing conditions of the dredging areas and materials to be dredged are represented on the plans and sediment sieve analysis sheets. Dredging shall be performed in a uniform and continuous manner so as to avoid creating multiple holes, valleys, or ridges. The Contractor shall dredge no deeper than the maximum overdepth elevation shown on the plans for the dredging areas.

2.3.3. Turbidity

Excavation and disposal operations shall be done in a manner that will minimize turbidity of

the water at the excavation site and at the discharge from the disposal area. Weir boards in the spillway shall be maintained and adjusted to minimize the turbidity of effluent being discharged from the disposal area. Weir boards shall not be installed above an elevation of +6.0' MLW. The Contractor shall control the dredge production and pipeline discharge into the disposal area to maintain a water level not exceeding a height of 6" over the top weir boards. If monitoring shows that turbidity exceeds the level allowed by the project Permits, construction activities shall cease immediately and not resume until corrective measures have been taken and turbidity has returned to acceptable levels. No separate payment will be made for providing and maintaining any required turbidity barriers. All such related cost shall be included in the contract unit prices for Bid Item No. 002 DREDGING AND DISPOSAL.

2.3.4. Dredge Template

2.3.4.1. Permitted Depth

The shoaled material shall be removed from within the dredging areas to clear the required bottom grade but not more than the permitted overdepth (2.0'), as shown on the plans.

2.3.4.2. Side Slopes

Side slopes may be formed by box cutting or dredging along the side slope. Material actually removed, within the limits approved by the Engineer, to provide for final side slopes not flatter than that shown on the contract plans, but not in excess of the amount originally lying above this limiting side slope, will be measured in accordance with the provisions contained in SECTION VI MEASUREMENT AND PAYMENT.

2.3.4.3. Excessive Dredging

Excessive dredging below the overdepth limit is a permit violation. Materials taken from beyond the limits as described in subparagraphs "Permitted Depth" and "Side Slopes" above, will be deducted from the total amount dredged as excessive overdepth dredging, or excessive side slope dredging, for which payment will not be made. Nothing herein shall be construed to prevent payment for the removal of shoals performed in accordance with the applicable provisions of the subparagraph "Final Examination and Acceptance" below.

2.3.4.4. Final Examination and Acceptance

As soon as practicable and no later than three (3) days after the completion of each acceptance section, as in the opinion of the Engineer will not be subject to damage by further operations under the contract, such work will be thoroughly examined at the cost and expense of the County by sounding or by sweeping, or both, as determined by the Engineer. Should any shoals, lumps, or other lack of contract depth be disclosed by this examination, the Contractor will be required to remove same by dredging. Dragging to remove shoals shall not be permitted. The Contractor or its authorized representative will be notified when soundings and/or sweepings are to be made and will be permitted to accompany the survey party. When the area is found to be in a satisfactory condition, it will be accepted.

2.3.4.5. Position Monitoring

The Contractor shall use an Electronic Positioning System (EPS) to ensure that the excavation area is limited to the area shown on the plans. The Contractor shall be solely responsible for any penalties or fines, which may arise from over-excavation, or excavation beyond the limits of dredging set forth in the plans.

2.3.5. Protection of Existing Waterways

The Contractor shall conduct its operations in such a manner that material or other debris are not placed outside of dredging limits or otherwise deposited in existing side channels, the AIWW, or other areas being utilized by vessels. The Contractor will be required to change its method of operations as may be required to comply with the above requirements. Should any bottom material or other debris be placed into areas described above as a result of the Contractor's operations, the same must be promptly removed and properly disposed of at the expense of the Contractor to the satisfaction of the County.

2.4. TRANSPORT OF DREDGED MATERIALS

Material dredged shall be transported to and deposited in the upland disposal area DA-241 as described in Subsection 4 DISPOSAL WORK and as shown on the plans.

2.4.1. Dredge Discharge Pipeline

The pipeline placement must be coordinated with the County, USACE, USFWS, North Carolina Wildlife Resources Commission (NCWRC) and NCDWM. The Contractor shall plainly mark the pipeline access routes with conspicuous stakes, targets, and/or buoys, to be maintained throughout the contract operations. A tight dredge discharge pipeline shall be maintained to prevent spilling of dredged material or dredged water outside of the disposal area. During dredging operations, the Contractor shall conduct a minimum of two inspections per day of the pipeline. Dredging shall not be resumed until the necessary pipeline repairs have been completed. The Contractor's shore crew and pipeline personnel are to quickly notify the dredge should the disposal area effluent discharge exceed water quality standards or pipeline leakage occurs. The Contractor shall inform the Engineer at what time the problems were found and time when action was taken to correct the problems. Plant downtime to make pipeline repairs will be at no added cost to the County or a basis for time extension.

2.4.2. Submerged Pipeline

In the event the Contractor elects to submerge its pipeline, the pipeline shall rest on the bottom, and the top of the submerged pipeline and any anchor securing the submerged pipeline shall be no higher than the required project depth for the channel in which the submerged pipeline is placed. Should the Contractor elect to use a pipeline material, which is buoyant or semi-buoyant, such as PVC pipe, or similar materials, the Contractor shall securely anchor the pipeline to prevent the pipeline from lifting off the bottom under any conditions. The Contractor shall remove all anchors when the submerged pipeline is removed. The location of the entire length of submerged pipeline shall be marked with signs, buoys, flags and lights, conforming to U.S. Coast Guard regulations.

2.4.3. Floating Pipeline

Should the Contractor's pipeline not rest on the bottom, it will be considered a floating pipeline and shall be visible on the surface and clearly marked. In no case will the Contractor's pipeline be allowed to fluctuate between the surface and the bottom, or lie partly submerged. Lights shall be installed on the floating pipeline as required under Subsection 1.12 SIGNAL LIGHTS. The lights shall be supported either by buoys or by temporary pilings, provided by the Contractor and approved by the Engineer. Where the pipeline does not cross a navigable channel, the flashing yellow all-around lights shall be spaced not over 200 feet apart, unless closer spacing is required by U.S. Coast Guard personnel, in which case the requirements of the U.S. Coast Guard shall govern, at no additional cost to the County.

2.4.4. Work Area

The Contractor shall inventory all anchors, buoys, and buoy cables deployed in the prosecution of the work. The Contractor shall use this information to account for and recover

these items at the completion of the project.

3. SPILLWAY WORK

3.1. SCOPE

The Contractor shall furnish all labor, equipment, materials and perform all operations in connection with repairs and installation of spillway system components at Disposal Area 241. The work shall include but not be limited to installation of new spillway riser anchoring systems, and installation and maintenance of weir boards. The specific spillway system work requirements are described on the drawings.

3.2. REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM A153/A153M (2009) Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware

ASTM A760/A760M

ASTM D698 (2012; E 2014) Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/cu. ft. (600 kN-m/cu. m.))

AMERICAN WOOD PROTECTION ASSOCIATION (AWPA)

AWPA M4 (2011) Standard for the Care of Preservative-Treated Wood Products

AWPA U1 (2013) Use Category System: User Specification for Treated Wood

3.3. SUBMITTALS

The Contractor shall submit to the Contracting Officer certificates, invoices or catalog cuts attesting that the following materials furnished meet the required specifications: treated lumber, steel hardware, and weir boards.

3.4. MEASUREMENT AND PAYMENT

3.4.1. Spillway Systems

All costs for labor, materials, equipment, tools, supplies, and incidentals necessary to repair, furnish and install the spillway system components shall be included in the respective contract price for "Dredging and Disposal" as listed in the Bid Schedule.

3.5. HARDWARE

All hardware for anchoring components shall be hot-dip galvanized in accordance with ASTM A153/A153M.

3.6. WEIR BOARDS

Weir boards shall be 3" x 6", sized to fit the frame fully but with adequate clearance for easy placement and removal, nominal tongue and groove (T&G) lumber, Southern Yellow Pine #2 or approved equal, treated with waterborne preservatives in accordance with AWPA UI to the

requirements of Use Category UC5B after fabrication. Untreated white oak may also be used.

3.7. ANCHOR INSTALLATION

Six (6) screw-type galvanized earth anchors, or approved equivalent, shall be installed at each riser and shall be proof loaded to 2,500 lbs. each, by a method approved by the Engineer. Grade 30 hot-galvanized, high-tensile anchor chain (1"), or approved equivalent, shall be attached to the internal structural members of the ACMP riser. Connections shall be made with drop forged galvanized turnbuckles (1-1/4" x 12") and galvanized screw pin anchor shackles (1"), or approved equivalent. Subcontractor shall provide a cut sheet of equivalent items for approval by the Engineer.

3.8. CLEANING AND CLEARING OF SPILLWAY

Spillways shall be cleared of mud, silt, debris, or other matter that will interfere with proper functioning before weir boards are placed in them. All weir boards shall be positively seated.

3.9. ACCEPTANCE

Inspections of the spillway risers and pipe will be performed by the Engineer. The inspection will include but not be limited to the following: verifying that all silt and debris has been removed from spillway risers, verifying that the spillway riser anchoring system and weir boards were properly installed and verifying use of specified lumber and hardware. Defects found during the inspection shall be corrected prior to acceptance.

4. DISPOSAL WORK

4.1. GENERAL

All dredged materials shall be transported to and disposed of in the designated disposal area. Any existing signs, buoys or other structures within the work lines shall be protected and/or removed and later replaced by the Contractor as directed.

4.2. CONSTRUCTION

- a. The Contractor shall maintain a tight discharge pipeline for the pumpout operations at all times. The joints shall be so constructed as to preclude spillage and leakage. The submerged pipeline shall be visually inspected by the Contractor daily during period of active pumpout operations for signs of slicks, plumes, boils, or other surface anomalies that would indicate leaks, seepage, ruptures, or failures. All occurrences shall be indicated in the Contractor's daily report. The development of a leak shall be promptly repaired or the pumpout operations shall be shut down until complete repair has been made to the satisfaction of the Engineer. Any areas of seepage, leakage, or failure shall be reported to the Engineer as soon as possible. The Contractor shall be required to maintain signs, barricades, warning signals, and flagmen to insure public safety in the vicinity of the pipe discharge. Any damages to private or public property resulting from the Contractor's operations shall be repaired by the Contractor at his expense.
- b. The designated disposal area is DA-241 as indicated on the drawings. The Contractor shall obtain approval of the pipeline routes and initial discharge points from the Engineer prior to commencement of dredging and disposal operations. The contractor shall obtain photographs of the proposed pipeline route and access point for presentation and review at the pre-construction meeting.
- c. DA-241 is the furnished confined upland disposal areas for dredged material. The Contractor shall complete repairs to the spillway system prior to disposal operations. The Contractor shall install weir boards in each of the spillway riser bays. The Contractor shall obtain approval of the pipeline route and initial discharge point from the Engineer prior to commencement of disposal operations. The Contractor shall provide a minimum of one person, fully awake and alert, on the disposal areas at all times pumping operations are in progress and, if in the opinion of the Contracting Officer it is necessary, during non-pumping hours. One dozer and operator shall be stationed at

the dredging discharge line to ensure that the effluent is controlled in such a manner that high velocity discharge will not impinge on or cause erosion of the dikes. The Contractor shall monitor both the height of the retained water and the spillways during disposal operations and adjust the height of the spillway weir boards to allow maximum settling of suspended solids and to assure proper drainage of the retained water and to ensure sufficient freeboard (2' minimum is required) is maintained within the diked disposal areas to assure the integrity of the dike structures and the containment of the dredged material. The Contractor shall also inspect the spillways, dike, and other critical areas during dredging operations for any evidence of potential instability such as cracking, seepage, piping, settlement or slope movement. At least four inspections per 24-hour day shall be conducted as directed by the Engineer. If evidence of instability is found, the Contractor shall notify the Engineer immediately and await further instruction. The person at the disposal area shall be in constant contact with the lever room of the dredge and shall monitor the discharge and the pipeline for leaks to be certain material is not deposited outside the limits of the disposal areas. The breaking of dikes to permit free drainage will not be permitted. The Contractor is responsible for maintenance of the disposal areas including the dikes and spillway systems throughout the life of the contract. Material shall not be allowed to mound above a height of 11.0' MLW. The Contractor shall provide sufficient pipeline to fill the northernmost and easternmost extents of the disposal area. The Contractor shall smooth out any mounds and depressions as directed by the Engineer after the completion of dredging and disposal operations.

4.3. MISPLACED MATERIALS

If any material is deposited other than in places designated or approved, the Contractor may be required to remove such misplaced material and redeposit it where directed at his expense. Misplaced materials are meant to include materials lost due to pipeline leaks, short-pumping, or exceeding vertical limit.

4.4. WORK AREA

The construction, operational, and dredging area limits available to the Contractor for accomplishing the work are shown on the drawings. At the disposal area, the Contractor may only operate within the work areas shown on the drawings. The Contractor shall exclude the public from the work areas in the immediate vicinity of his dredging, transporting, and disposal operations. The Contractor shall prevent public access to the disposal area. Enforcement shall be the Contractor's responsibility at no additional cost to the County. The enforcement shall be coordinated with local enforcement agencies, and will be subject to approval of the Engineer. Procurement of additional access routes for ingress and egress to the construction area shall be obtained by and at the expense of the Contractor and shall be approved by the Engineer.

4.5. CONSTRUCTION ACCESS

Procurement of additional access routes for ingress and egress to the construction area shall be obtained by and at the expense of the Contractor and shall be approved by the Engineer. At all access sites to be utilized, the Contractor shall:

- a. Photo-document the condition of the access location prior to disrupting the site.
- b. Replace any fencing, signage or curbing disturbed by the Contractor's activities; and,
- c. Restore and revegetate the access route with native plants subject to the approval of the Engineer. Revegetation of access and staging areas shall be as directed by the Engineer with species and diversity equivalent to preconstruction conditions. Revegetation shall include a survival warranty of 90 percent of the plant material for 90 days. Vegetation shall be installed with fertilization and initial irrigation, at no additional expense to the County. Shrubs and trees shall be replaced to preconstruction conditions per the requirements of SECTION X ENVIRONMENTAL PROTECTION.

4.6. NOISE CONTROL

- 4.6.1. Hauling and Excavating Equipment Other Than Dredges and Booster Pumps

All hauling and excavating equipment, other than dredges and booster pumps, used on this work shall be equipped with satisfactory mufflers or other noise abatement devices. The Contractor shall conduct his operations so as to comply with all Federal, State, and local laws and County ordinances pertaining to noise.

4.6.1.1. Dredges, Bulk Carriers, and Booster Pumps

Dredges and booster pumps used on this work shall be equipped with satisfactory mufflers or other sound abatement devices to reduce engine noise. The Contractor shall conduct his operations so as to comply with all Federal, State, and local laws pertaining to noise. The use of horns, the use of whistle signals, and handling of dredge pipelines shall be held to the minimum necessary in order to insure as quiet an operation as possible.

4.7. QUALITY CONTROL

The Contractor shall establish and maintain quality control for operations under this section to assure compliance with contract requirements and maintain records of his quality control for materials, equipment, and construction operations, including but not limited to the following:

4.7.1. Preparatory Inspection

(To be conducted prior to commencing work.)

- a. Check location of dredging areas, and conditions of disposal areas to be filled.
- b. Discuss plan of action for dredging, transporting, and placing dredged material in the disposal area.
- c. See that all equipment is approved and is in satisfactory working condition.
- d. Check safety requirements and, particularly, public safety.

4.7.2. Initial Inspections

(To be conducted after a representative sample of the work is complete.)

- a. Check for proper lines, grades, and elevations
- b. See that diking and disposal discharge is satisfactory.

4.7.3. Follow-up Inspection

(To be conducted daily to assure compliance with results of initial inspection.)

- a. Check items mentioned in preparatory and initial inspection.
- b. Damage or defects.

A copy of these records, as well as results of corrective action taken, shall be furnished to the County as directed by the Engineer.

4.8. QUALITY CONTROL FOR PLACEMENT OF DREDGED MATERIAL IN THE DISPOSAL AREA

The Contractor shall perform construction observation to reasonably assure that the work will be in conformance with the required contract and permit conditions. Construction observation shall be performed 7 days a week, 24 hours a day. Daily reports will describe the disposal operations.

4.9. INSPECTION

4.9.1. Engineer and Inspectors

The Engineer shall be notified prior to the establishment of horizontal control work (baseline layout, ranges, station flags, shore-based control for EPS/RPS, etc.) and vertical control work (tide staff(s), upland cross sections, construction elevations top/invert, maximum/minimum elevations of dredged materials within disposal area(s), etc.), but the presence or absence of the Engineer or Inspectors shall not relieve the Contractor of his responsibility for proper execution of the work in accordance with the specifications. The Contractor will be required:

- a. To furnish, on the request of the Engineer or Inspectors, the use of such boats, boatmen, laborers, and material forming a part of the ordinary and usual equipment and crew of the dredging plant as may be reasonably necessary in inspecting and supervising the work.
- b. To furnish, on the request of the Engineer or Inspectors, suitable transportation from all points on shore designated by the Engineer to and from the various pieces of plant, and to and from the disposal area.

4.9.2. Failure to Comply

In conjunction with the Clause INSPECTION OF CONSTRUCTION, should the Contractor refuse, neglect, or delay compliance with these requirements, the specific facilities may be furnished and maintained by the Engineer and the cost thereof will be deducted from any amounts due or to become due the Contractor.

5. FINAL ACCEPTANCE

Prior to final acceptance, each of the following requirements shall be satisfied:

- All punch-list items are to be corrected or completed.
- As-built drawings redlined, submitted and approved by the Engineer.
- All other submittals as specified in Subsection 1.3 SUBMITTALS.
- All clean up and demobilization completed.
- Final inspection with Engineer conducted.

-- End of Section --

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APPENDICES

- A. BID FORMS
- B. AGREEMENT
- C. SEDIMENT ANALYSES
- D. PERMITS

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A. BID FORMS

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**BID PROPOSAL FORM TO
NEW HANOVER COUNTY,
NORTH CAROLINA**

Proposal of Bidder: _____

Business Address: _____

Project Name: **AIWW Maintenance Dredging Project – Mason Creek Crossing**

To: New Hanover County
 Engineering Department
 Attn: Layton Bedsole, Shore Protection Coordinator
 230 Government Center Drive, Suite 160
 Wilmington, NC 28403

(1) The undersigned, as Bidder, declares that the only person or parties interested in this Proposal as principals are those named herein, that this Proposal is made without collusion with any other person, firm or corporation; that he/she has carefully examined the location of the proposed forms of Agreement and Bonds, and the Contract Plans and Specifications for the below designated work, and all other documents referred to or mentioned in the Contract Documents and Contract Plans.

(2) The Bidder proposes, and agrees, if this Proposal is accepted, that Bidder shall contract with the County, in the form of the copy of the Agreement included in these Contract Documents and Specifications, to provide all necessary machinery, tools, apparatus, and other means of construction, including utility transportation, security, and safety-related services, necessary to do all the Work; and that he/she shall furnish all the materials and equipment specified or referred to in the Contract Documents and Specifications in the manner and time herein prescribed and according to the requirements of the County as therein set forth.

(3) The Bidder declares that he/she has carefully examined the site of the Work and that from Bidder's own investigations, has satisfied him/herself as to the nature and location of the Work, the character, quality, and quantity of materials, and the kind and extent of equipment and other facilities needed for the performance of the Work, the general and local conditions and all difficulties to be encountered, all other items which may in any way, affect the Work or Bidder's performance.

(4) The Bidder declares he/she has examined the Contract Documents and Specifications and the following addenda:

<u>Number</u>	<u>Date</u>	<u>Number</u>	<u>Date</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Receipt of all of which, including copies of the Notice to Bidders and the Instructions to Bidders, Bidder hereby acknowledges.

The Bidder certifies that addendum(s) number(s) _____ through _____ for this Contract have been received and that changes covered by the addendum(s) have been taken into account with the total bid price.

(5) The Bidder declares that he/she has carefully examined, and fully understands, all the component parts of the Contract Documents and Specifications, and agrees that he/she shall execute the Contract, furnish the required Payment Bond and Performance Bond, and completely perform the Work in strict accordance with the terms of the Contract and the Contract Documents and Specifications therein referred to for the following prices, to wit:

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(6) Schedule for Bid Prices

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Based on Estimated Quantity
001	Mobilization & Demobilization	1	L.S.		\$ _____
002	Dredging and Disposal	75,000	C.Y.	\$ _____	\$ _____
003	Payment and Performance Bonds	1	L.S.		\$ _____

The total of items 1, 2, & 3 is \$ _____

Available Date for Commencement of Work: _____

(Affiant)

State of Incorporation (if corporation)

Official Address (if partnership)

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EQUIPMENT SCHEDULE
FORM TO BE SUBMITTED WITH BID

Prospective Bidders are requested to state below the number and types of equipment to be used for the Project. This schedule shall include equipment owned and/or operated by the Contractor and by any Subcontractor responsible for more than 10% of the total work. Indicate if the equipment is owned or operated by the Bidder or Subcontractor.

ITEM	NUMBER/NAME	HP	PIPE DIAMETER	AGE	OWNER/OPERATOR
DREDGE	_____	_____	_____	_____	_____
DREDGE	_____	_____	_____	_____	_____
BOOSTER	_____	_____	_____	_____	_____
BOOSTER	_____	_____	_____	_____	_____
TUG	_____	_____	_____	_____	_____
TUG	_____	_____	_____	_____	_____
BARGES	_____	_____	_____	_____	_____

ITEM	NUMBER	TYPE	CAPACITY	OWNER/OPERATOR
BULLDOZER	_____	_____	_____	_____
BULLDOZER	_____	_____	_____	_____
BULLDOZER	_____	_____	_____	_____
EXCAVATOR	_____	_____	_____	_____
EXCAVATOR	_____	_____	_____	_____
LOADER	_____	_____	_____	_____
TRUCKS	_____	_____	_____	_____
TRUCKS	_____	_____	_____	_____
OTHER	_____	_____	_____	_____
OTHER	_____	_____	_____	_____

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RELEVANT PROJECT EXPERIENCE
FORM TO BE SUBMITTED WITH BID

Prospective Bidders are requested to list below any Federal or private channel dredging projects completed in the last (5) five years with equipment used.

PROJECT NAME	OWNER	SIZE (CY)	DURATION DAYS	COMPLETION DATE
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

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FORM OF AFFIDAVIT
WHERE BIDDER IS A CORPORATION
(COMPLETE EITHER SHEET 3 OR SHEET 4, AS APPLICABLE)

STATE OF _____

COUNTY OF _____

_____, being duly sworn deposes and says: I am the _____ of _____, the _____ corporation described in and which executed the foregoing Proposal; that I have been duly authorized and did execute the Proposal Pursuant to the authorization, and that the matters stated therein are true.

BIDDER:

Print or Type Name of Entity

By: _____
Signature and Seal

Print or Type Name

Date

The foregoing instrument was acknowledged before me this _____ (date) by _____ (name of agent or officer), of _____ (Corporate name), a _____ (state of incorporation) corporation, on behalf of the corporation. He/She is personally known to me or has produced _____ (ID type) as identification and who did (did not) take an oath.

(Signature of person taking acknowledgement)

(Name of acknowledgement, print, type, or stamp)

(Title or Rank)

(Serial number, if any)

WHERE BIDDER IS A PARTNERSHIP
(COMPLETE EITHER SHEET 3 OR SHEET 4, AS APPLICABLE)

STATE OF _____

COUNTY OF _____

_____, being duly sworn deposes and says: I am general/limited (strike one) partner in _____ (entity name) a Limited/General Partnership, described in and which executed the foregoing Proposal; that I have been duly authorized and did execute the Proposal Pursuant to the authorization, and that the matters stated therein are true.

BIDDER:

Print or Type Name of Entity

By: _____
Signature and Seal

Print or Type Name

Date

The foregoing instrument was acknowledged before me this _____ (date) by _____ (name of agent or officer), of _____ (entity name), on behalf of the partnership. He/She is personally known to me or has produced _____ (ID type) as identification and who did (did not) take an oath.

(Signature of person taking acknowledgement)

(Name of acknowledgement, print, type, or stamp)

(Title or Rank)

(Serial number, if any)

NONCOLLUSION AFFIDAVIT

STATE OF _____

COUNTY OF _____

_____ being first duly sworn, deposes and says that he/she is (Sole owner, a limited/general (strike one) partner, president, etc.) of, _____ the party making the foregoing Proposal or BID, that such BID is genuine and not collusive or sham; that said BIDDER has not colluded, conspired, connived, or agreed, directly or indirectly, with any BIDDER or person, to put in a sham BID, or that such other person shall refrain from bidding, and has not in any manner, directly or indirectly sought by agreement or collusion, or communication or conference, with any person, to fix the BID Price of affiant or any other BIDDER, or to fix any overhead, profit or cost element of said BID Price, or of that of any other BIDDER, or to secure any advantage against COUNTY any person interested in the proposed Contract; and that all statements in said Proposal or BID are true; and further, that such BIDDER has not, directly or indirectly submitted this BID the contents thereof, or divulged information or date relative thereto to any association or to any member or agent thereof.

(Affiant)

(FOR A CORPORATION)

The foregoing instrument was acknowledged before me this _____ (date) by _____ (title of officer or agent) of _____

(name of corporation acknowledging), a _____ (state or place of incorporation) corporation, on behalf of the corporation. He/she is personally known to me or has produced _____ (ID type) as identification and who did (did not) take an oath.

(Signature of person taking acknowledgement)

(Name of acknowledgement, print, type, or stamp)

(Title or Rank)

(Serial number, if any)

**FORM OF NONCOLLUSION AFFIDAVIT
(Continued)**

(FOR A PARTNERSHIP)

The foregoing instrument was acknowledged before me this _____ (date) by
_____ (name of agent or officer), of
_____ (entity name), on behalf of the partnership. He/She is
personally known to me or has produced _____ (ID type) as identification and
who did (did not) take an oath.

(Signature of person taking acknowledgement)

(Name of acknowledgement, print, type, or stamp)

(Title or Rank)

(Serial number, if any)

(FOR ATTORNEY IN FACT)

The foregoing instrument was acknowledged before me this _____ (date) by
_____ (name of attorney in fact), of
_____ (entity name), on behalf of the partnership. He/She is
personally known to me or has produced _____ (ID type) as identification and
who did (did not) take an oath.

(Signature of person taking acknowledgement)

(Name of acknowledgement, print, type, or stamp)

(Title or Rank)

(Serial number, if any)

**SWORN STATEMENT PURSUANT TO
NORTH CAROLINA STATUTES, ON PUBLIC ENTITY CRIMES**

THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS.

This sworn statement is submitted to New Hanover County, North Carolina.

By _____
(individual's name and title)

By _____
(entity's name submitting statement)

whose business address is,

-

and (if applicable) its Federal Employer Identification Number (FEIN) is _____

(If the entity has no FEIN, include Social Security Number of the individual signing this sworn statement: _____)

2. I understand that a "public entity crime" as defined in the North Carolina Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or of the United States, including, but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.
3. I understand that "convicted" or "conviction" as defined in the North Carolina Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, no jury trial, or entry of a plea of guilty or nolo contendere.
4. I understand that an "affiliate" as defined in North Carolina, means:
 - a. A predecessor or successor of a person convicted of a public entity crime; or
 - b. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in North Carolina during the preceding 36 months shall be considered an affiliate.

**SWORN STATEMENT PURSUANT TO
NORTH CAROLINA STATUTES, ON PUBLIC ENTITY CRIMES - (Continued)**

5. I understand that a "person" as defined in North Carolina Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.
6. Based on information and belief, the statement, which I have marked below, is true in relation to the entity submitting this sworn statement. **[indicate which statement applies]**

_____ Neither the entity submitting this sworn statement, nor any of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, nor any affiliate of the entity has been charged with and convicted of a public entity crime subsequent to (date).

_____ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to (date).

_____ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity. or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to (date). However, there has been a subsequent proceeding before a Hearing Officer of the State of North Carolina. Division of Administrative Hearings and the Final Order entered by the Hearing Officer determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list. [attach a copy of the final order]

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 (ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN THE NORTH CAROLINA STATUTES FOR A CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

(Signature)

Sworn to and subscribed before me this _____ day of _____, 2015.

Personally known _____

OR Produced identification _____

(type of identification)

Notary Public – State of _____

My Commission Expires _____

(printed typed or stamped commission name of Notary Public)

STATEMENT OF LICENSE CERTIFICATE

EACH CONTRACTOR SHALL FILL IN AND SIGN THE FOLLOWING STATEMENT

This is to certify that _____ has satisfactorily met the certification requirements of Chapter 87 of the North Carolina General Statutes and the rules and regulations incorporated in Title 21 Chapter 12 of the North Carolina Administrative Code. The Contractor's certificate number and date of certification shall appear on the sealed envelope containing the bid package. Failure to include the certification will result in the bid being deemed non-responsive.

_____ was issued Certificate No. _____

on _____, by the Industry Licensing Board.

BIDDER:

Print or Type Company Name

By: _____
Signature

Print or Type Name

Print or Type Title

Date

FORM OF BID BOND

KNOW ALL MEN BY THESE PRESENTS THAT _____
_____ as
principal, and _____, as surety, who is
duly licensed to act as surety in North Carolina, are held and firmly bound unto New
Hanover County as obligee, in the penal sum of _____
DOLLARS, lawful money of the United States of America, for the payment of which, well
and truly to be made, we bind ourselves, our heirs, executors, administrators, successors
and assigns, jointly and severally, firmly by these presents.

Signed, sealed and dated this ____ day of ____ 20__

WHEREAS, the said principal is herewith submitting proposal for and the principal
desires to file this bid bond in lieu of making the cash deposit as required by G.S. 143-129.

NOW, THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION is such, that
if the principal shall be awarded the contract for which the bid is submitted and shall
execute the contract and give bond for the faithful performance thereof within ten days after
the award of same to the principal, then this obligation shall be null and void; but if the
principal fails to so execute such contract and give performance bond as required by G.S.
143-129, the surety shall, upon demand, forthwith pay to the obligee the amount set forth in
the first paragraph hereof. Provided further, that the bid may be withdrawn as provided by
G.S. 143-129.1

_____(SEAL)

_____(SEAL)

_____(SEAL)

_____(SEAL)

_____(SEAL)

B. AGREEMENT

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NORTH CAROLINA
NEW HANOVER COUNTY

AGREEMENT

AIWW MAINTENANCE DREDGING PROJECT – MASON CREEK CROSSING

THIS CONTRACT made and entered into this ____ day of _____ 2016 by and between NEW HANOVER COUNTY a political subdivision of the State of North Carolina, hereinafter referred to as "County"; and _____, a _____ corporation, hereinafter referred to as "Contractor."

W I T N E S S E T H:

That Contractor, for the consideration hereinafter fully set out, hereby agrees with County as follows:

DEFINITIONS

Addenda. Written or graphic instruments issued prior to the opening of bids that clarify, correct, or change the Bidding Requirements or the Contract Documents.

Agreement. The written instrument evidencing the covenant between County and the Contractor covering the Work.

Application for Payment. The form acceptable to County which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

Bidding Documents. The bidding requirements and the proposed Contract Documents (including all addenda issued prior to receipt of bids).

Bidding Requirements. The advertisement or invitation to bid, instructions to bidders, bid security form, if any, and the bid form with any supplements.

Bonds. Bid performance and payment bonds and other instruments of security.

Change Order. A document recommended by County which is signed by Contractor authorizing an addition, deletion, or revision in the Work or an adjustment in the contract price or the contract time, issued on or after the effective date of the Contract.

Claim. A demand or assertion by County or Contractor seeking an adjustment of Contract Price or Contract Time, or both, or other relief with respect to the terms of the contract. A demand for money or services by a third party is not a claim.

Contract. The entire and integrated written contract between County and Contractor concerning the Work. The contract supersedes prior negotiations, representations, or agreements, whether written or oral.

Contract Documents. The Contract Documents establish the rights and obligations of the parties and include the Contract, addenda (pertaining to the Contract Documents), contractor's bid (including documentation accompanying the bid and any post-bid documentation submitted prior to the notice of award) when attached as an exhibit to the Contract, the Notice to Proceed, the bonds, these general terms and conditions, the supplementary terms and conditions (if any), the specifications and the drawings as the same are more specifically identified in the Contract, together with all written amendments, change orders, and field orders written issued on or after the effective date of the Contract. Shop Drawings, Product Data, Samples, and other submittals from Contractor do not constitute Contract Documents. Their purpose is merely to demonstrate the manner in which Contractor intends to implement any work in conformance with information received from the Contract Documents.

Contract Price. The moneys payable by County to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Contract (subject to the provisions relating to unit price work, if applicable).

Contract Time. The number of calendar days or the dates stated in the Contract to: (i) achieve Substantial Completion; and (ii) complete the work so that it is ready for final payment pursuant to written recommendation of final payment.

Contractor. The individual or business entity with whom County has entered into a Contract.

County. This term shall be construed to mean, when referencing an individual, the New Hanover County Shore Protection Coordinator, or his designee, or the New Hanover County Engineer.

Drawings. That part of the Contract Documents prepared or approved by County that graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop drawings and other Contractor submittals are not drawings as defined herein.

Field Order. A written order issued by County that requires minor changes in the Work by which does not involve a change in the Contract Price or the Contract Time.

Final Completion. The date when all the Work outstanding at Substantial Completion (punch list or defects list) has been completed.

Liens. Charges, security interests, or encumbrances upon project funds, real property, or personal property.

Notice to Proceed. A written notice given by County to Contractor fixing the date on which the Contract Time (including milestones, if applicable) will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

Project. The total construction of and the Work to be performed under the Contract Documents.

Samples. Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

Schedule of Values. A listing of elements, systems, items, or other subdivisions of the Work, establishing a value for each, the total of which equals the contract sum. The schedule of values is used for establishing the cash flow of a project.

Shop Drawings. All drawings, diagrams, illustrations, schedules, or other data or information that are specifically prepared or assembled by Contractor to illustrate some portion of the Work.

Site. Lands or areas indicated in the Contract Documents as being furnished by County upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by County which are designated for the use of Contractor.

Specifications. That part of the Contract Documents consisting of written technical descriptions of materials, equipment, systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto.

Stoppage. Any willful suspension of the Work on the Project by Contractor for an uninterrupted period of seven (7) business days for any reason not requested by County and not caused by conditions created by natural phenomena or acts of God.

Subcontractor. An individual or entity having a direct contract with Contractor or with any other subcontractor for the performance of a part of the Work at the site.

Substantial Completion. The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of County, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to substantial completion thereof.

Unit Price Work. Work to be paid for based on unit prices.

The Work. The entire completed construction or the various separately identifiable parts thereof required to be provided by the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

ARTICLE I
GENERAL PROVISIONS

1.1 Performance. Contractor shall furnish all labor, materials and equipment and shall perform all Work as defined herein in the manner and form as provided by the specifications and Contract Documents, which are made a part hereof as if fully contained herein to the extent not inconsistent with this Agreement: Addenda, Instructions to Bidders, Contract Provisions, Technical Specifications, Appendices, and Drawings of "AIWW Maintenance Dredging-Mason Creek Crossing".

1.2 No Privity with Others. Nothing contained in this Contract shall create, or be interpreted to create, privity, or any other contractual agreement between County and any person or entity other than Contractor.

1.3 Successors and Assigns. County and Contractor bind themselves, their successors, assigns, and legal representatives to the other party hereto and to successors, assigns and legal representatives of such other party with respect to covenants, agreements, and obligations contained in this Contract. Contractor shall not assign this Contract without written consent of County and any surety to this Contract.

1.4 Continuing Duty. Contractor shall have a continuing duty to read, carefully examine, and compare each of the Contract Documents, the Shop Drawings and the Project Data and shall provide written notice to County of any inconsistency, ambiguity, error, or omission which Contractor may discover with respect to these documents before proceeding with the Work. The issuance or the express or implied approval by County of the Contract Documents, Shop Drawings, Project Data, or Samples shall not relieve Contractor of its continuing duties imposed hereby, nor shall any approval be evidence of Contractor's compliance with this contract. COUNTY MAKES NO REPRESENTATION OR WARRANTY OF ANY NATURE WHATSOEVER TO CONTRACTOR CONCERNING THE ACCURACY OR SUFFICIENCY OF SUCH DOCUMENTS. By the execution of the Contract, Contractor acknowledges and represents that it has received, reviewed, and carefully examined such documents, has found them to be complete, accurate, adequate, consistent, coordinated and sufficient to perform the Work, and that Contractor has not, does not, and will not rely upon any representation or warranties by County concerning such documents as no such representation or warranties have been or are hereby made.

1.5 Neither the organization of any of the Contract Documents into divisions, sections, paragraphs, articles, (or other categories), nor the organization or arrangement of the design, shall control Contractor in determining the scope of the Work to be performed.

1.6 Ownership of Contract Documents. The Contract Documents shall remain the property of County. Contractor shall have the right to keep one record set of the Contract Documents upon completion of the Project; provided, however, that in no

event shall Contractor use, or permit to be used, any Contract Documents on other projects without County's prior written authorization.

1.7 The Work. Contractor shall perform all of the work required, implied, or reasonably inferable from this Contract.

1.8 Independent Contractor. It is mutually understood and agreed that Contractor is an independent contractor and not an agent of County, and as such, Contractor, its agents and employees shall not be entitled to any County employment benefits, such as, but not limited to, vacation, sick leave, insurance, worker's compensation, pension, or retirement benefits.

ARTICLE II

TIME AND LIQUIDATED DAMAGES

2.1 Contract Time. Contractor shall commence the Work upon receipt of a Notice to Proceed and shall achieve Substantial Completion of the Work no later than March 30, 2017 or the last day allowed by state and federal regulatory agencies for the winter 2016/2017 dredging season, whichever is later.

2.2 Substantial Completion Liquidated Damages. Contractor shall pay County the sum of **One Thousand Five Hundred (\$1,500) Dollars** per day for each and every calendar day of unexcused delay in achieving Substantial Completion. Any sums due and payable hereunder by Contractor shall be payable, not as a penalty, but as liquidated damages representing an estimate of delay damages likely to be sustained by County, estimated at or before the date of executing this Contract. When County reasonably believes that Substantial Completion will be inexcusably delayed, County shall be entitled to withhold from any amounts due Contractor an amount determined by County to be adequate to recover liquidated damages attributable to such delays. If or when Contractor remedies the delay in achieving Substantial Completion, or any part thereof, for which County has withheld payment, County shall promptly release to Contractor all or a portion of those funds withheld as liquidated damages.

2.3 Term of Contract. Contractor shall commence the Work upon Notice to Proceed. Final Completion, including any punch list items, shall be achieved no later than March 30, 2017 or the last day allowed by state and federal regulatory agencies for the winter 2016/2017 dredging season, whichever is later.

ARTICLE III
CONTRACT CHANGES

3.1 Changes Permitted. Changes in the Work within the general scope of this Contract, consisting of additions, deletions, revisions, or any combination thereof, may be ordered by Change Order or Field Order without invalidating the Contract.

3.2 Changes in the Work shall be performed under applicable provisions of this Contract, and Contractor shall proceed promptly with such changes.

3.3 Changes in the Contract Price. Any change in the Contract Price resulting from a Change Order shall be determined as follows: (a) by mutual agreement between County and Contractor as evidenced by (1) the change in the Contract Price, together with any conditions or requirements related thereto, being initialed by both parties and (2) Contractor's execution of the Change Order.

3.4 Unit Price. If unit prices are provided in the Contract, and if the quantities contemplated are so changed in a proposed Change Order that application of such unit prices to the quantities of work proposed would cause substantial inequity to County or to Contractor, the applicable unit prices shall be equitably adjusted.

3.5 Effect of Executed Change Order. The execution of a Change Order by Contractor shall constitute conclusive evidence of Contractor's agreement to the ordered changes in the Work, the Contract Price, and the Contract Time. Contractor, by executing the Change Order, waives and forever releases any claim against County for additional time or compensation for matters relating to, arising out of, or resulting from the Work included within or affected by the executed Change Order.

3.6 Notification of Surety. Contractor shall provide surety bonds whereby the Surety waives notice of any change, including changes of time, to the Contract.

ARTICLE IV
CONTRACT PRICE AND COMPLETION

4.1 The Contract Price. County shall pay, and Contractor shall accept, as full and complete payment for all of the Work required herein, \$_____ **Dollars.** The sum shall constitute the maximum Contract Price, which shall not be modified except by Change Order.

Schedule of Prices

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Based On Estimated Quantity
001	Mobilization & Demobilization	1	L.S.		\$ _____
002	Dredging and Disposal	75,000	C.Y.	\$ _____	\$ _____
003	Performance & Payment Bonds	1	L.S.		\$ _____
Total of all items:					\$ _____

4.2. Schedule of Values. Within ten (10) calendar days of Contract execution, Contractor shall submit to County a Schedule of Values allocating the Contract Price to the various portions of the Work. Contractor's Schedule of Values shall be prepared in a format and supported with data sufficient to allow County to substantiate its accuracy. Contractor shall not imbalance its Schedule of Values nor artificially inflate any element thereof. The violation of this provision by Contractor shall constitute a material breach of this Contract. The Schedule of Values shall be used only as a basis for Contractor's Applications for Payment and must be approved in writing by County.

4.3 Payment Procedure. County shall pay the Contract Price to Contractor as provided below.

4.4. Progress Payments. Based upon Contractor's Applications for Payment approved by County, County shall make appropriate progress payments to Contractor toward the Contract Price.

4.5. Retainage. To ensure proper performance of the Contract, County will retain five percent (5%) of the amount of each approved Pay Application until the Project is 50% complete provided that Contractor continues to perform satisfactorily and any non-conforming work identified in writing prior to that date has been corrected by Contractor and accepted by County. If County determines Contractor's performance is unsatisfactory, County may reinstate retainage in the amount of five percent (5%) for each subsequent periodic Pay Application until Contractor's performance becomes satisfactory. The Project shall be deemed fifty percent (50%) complete when Contractor's gross Project invoices, excluding the value of materials and fixtures stored off-site, equal or exceed fifty percent (50%) of the value of the contract. The value of materials and fixtures stored on-site shall not exceed twenty percent (20%) of Contractor's gross project invoices for determining whether the Project is fifty percent (50%) complete. Upon fifty percent (50%) completion of the Project, County may also

withhold additional retainage from any subsequent periodic payments, not to exceed five percent (5%), to allow County to retain two and one half percent (2 ½%) total retainage through the completion of the Project. Within sixty (60) days after the submission of a final pay request, County, with written consent of the Surety, shall release to Contractor all retainage on payments held by County if (1) County receives a certificate of Substantial Completion from Contractor, Engineer, or Designer in charge of the Project; or (2) County may release all retainage, less that sum County reasonably estimates necessary to complete all punch lists, when County the use of the Project that is substantially complete. In all situations, County may retain sufficient funds to secure completion of the Project or corrections on any work. If County retains funds, the amount retained shall not exceed two and one half times (2 ½) the estimated value of the work to be completed or corrected. Any reduction in the amount of the retainage on payments shall be with the consent of Contractor's surety. Retainer provisions contained within Contractor's subcontracts may not exceed the terms and conditions for retainage provided herein. Nothing shall prevent County from withholding payment to Contractor in addition to the amounts identified herein for unsatisfactory job progress, defective construction, or remedied, disputed work or third-party claims filed against County or reasonable evidence that a third-party claim will be filed. Payment for stored materials and fixtures shall be conditioned upon Contractor's satisfactory proof to County that County has title to such materials and fixtures and shall include proof of required insurance. Such Application for Payment shall be signed by Contractor and shall constitute Contractor's representation that the Work has progressed to the level for which payment is requested in accordance with the Schedule of Values, that the Work has been properly installed or performed in full accordance with this Contract, and that Contractor knows of no reason why payment should not be made as requested. Thereafter, County will review the Application for Payment and may review the Work at the Project site or elsewhere to determine whether the quantity and quality of the Work is as represented in the Application for Payment and is as required by this Contract. County shall determine the amount properly owed to Contractor. County shall make partial payments of the Contract Price to Contractor within thirty (30) days following County's receipt of each Application for Payment. The amount of each partial payment shall be the amount certified for payment by County less such amounts, if any, otherwise owed by Contractor to County or which County shall have the right to withhold as authorized by this Contract.

4.6 Warranty of Title. Contractor warrants that title to all work covered by an Application for Payment will pass to County no later than at the time of the last payment to Contractor. Contractor further warrants that upon submittal of an Application for Payment, all work for which payments have been received from County shall be free and clear of liens, claims, security interests, or other encumbrances in favor of Contractor or any other person or entity.

4.7 Subcontractor Payments. Contractor shall promptly pay each subcontractor out of the amount paid to Contractor for such subcontractor's work, the amount to which such subcontractor is entitled. In the event County becomes informed that Contractor has not paid a subcontractor as herein provided, County shall have the right, but not the duty, to issue future payments to Contractor and or subcontractor as joint payees. Such joint payment procedure shall create no rights in favor of any person or entity beyond the right of the named payees to payment of the check and shall not be deemed to create any rights in favor of Contractor or subcontractors or to commit County to repeat such payments in the future.

4.8 Acceptance Not Implied. No progress payment, nor any use or occupancy of the Project by County shall be interpreted to constitute a final acceptance of any Work that is not in full compliance with this Contract.

4.9 Withheld Payment. County may decline to make payment, may withhold funds, and, if necessary, may demand the return of some or all of the amounts previously paid to Contractor, to protect County from loss due to:

- a) defective Work not remedied by Contractor nor, in the opinion of County, likely to be remedied by Contractor;
- b) claims of third parties against County or County's property;
- c) failure by Contractor to pay subcontractors;
- d) evidence that the balance of the Work cannot be completed in accordance with the Contract for the unpaid balance of the Contract price;
- e) evidence that the Work will not be completed in the time required for Substantial or Final Completion;
- f) persistent failure to carry out the Work in accordance with the Contract;
- g) damage to County or a third party to whom County is, or may be, liable.
- h) Failure of Contractor to maintain appropriate environmental protection measures or failure to comply with environmental permits, rules, and regulations.

In the event that County makes written demand upon Contractor for amounts previously paid by County as contemplated in this subparagraph, Contractor shall comply within thirty (30) business days of receipt of written demand.

4.10 Completion and Final Payment. When Contractor certifies that the Work is finally complete, Contractor shall submit to the County a list of items completed or corrected. When the County determines that the Work is finally complete, a Certificate of Final Completion will be prepared establishing the date of Final Completion. If the Work is complete in full accordance with this Contract and this Contract has been fully performed, County may proceed with payment. Any guarantees or warranties, express or implied, required by the Contract or arising under law shall commence on the date of Final Completion of the Work. The Certificate of Final Completion shall be submitted to County and Contractor for their written acceptance of the responsibilities assigned to them in such certificate.

4.11 Final Completion Liquidated Damages. If Contractor fails to achieve Final Completion within the time fixed by County in its Certificate of Substantial Completion, Contractor shall pay County the sum of One Thousand Five Hundred (\$1,500) Dollars per day for each and every calendar day of unexcused delay in achieving Final Completion beyond the date set forth herein for Final Completion of the Work. Any sums due and payable by Contractor shall be payable, not as a penalty, but as liquidated damages representing an estimate of delay damages likely to be sustained by County, estimated at or before the time of executing this Contract. When County reasonably believes that Final Completion will be unexcusably delayed, County shall be entitled to withhold from any amounts due Contractor an amount determined by County to be adequate to recover liquidated damages attributed to such delays. If and when Contractor remedies the delay in achieving Final Completion, or any part thereof, for which County has withheld payment, County shall promptly release to Contractor those funds, or a portion of those funds, withheld as liquidated damages.

4.12 Final Payment Submittals. Contractor shall not be entitled to final payment unless and until it submits to County its affidavit that all payrolls, invoices for materials and equipment, and other liabilities connected with the Work have been fully paid, that releases and waivers of lien are executed by subcontractors, and the consent of Surety has been obtained. If any third party fails or refuses to provide a release of claim or waiver of lien as required by County, Contractor shall furnish either a bond or monies satisfactory to County to discharge any such lien or indemnify County from liability.

4.13 Final Payment Due. County shall make final payment of all sums due Contractor within ten (10) business days of County's execution of a final Certificate for Payment.

4.14 Contractor Waiver. Acceptance of final payment shall constitute a waiver of all claims against County by Contractor except for documented Contractor's request for final payment.

ARTICLE V
COUNTY RIGHTS AND DUTIES

5.1 Information Provided by County. County shall deliver to Contractor, at the time of executing this Contract, all written and tangible materials in its possession concerning conditions below ground at the Project site. County shall furnish a legal description of the Project site, surveys, legal limitations and utility locations (if known). County does not represent, warrant, or guarantee the accuracy of the information either in whole, or in part, implicitly, or explicitly and shall have no liability for the accuracy of information.

5.2 Excluding permits and fees normally the responsibility of Contractor, County shall obtain all approvals, easements, and the like required for construction and shall pay for necessary assessments and charges required for construction, use, or occupancy of permanent structures or for permanent changes in existing facilities.

5.3 County shall furnish Contractor, free of charge, four (4) copies of the Contract Documents for execution of the Work. Contractor shall pay County, \$50.00 per additional set of Contract Documents.

5.4 Right To Stop Work. If Contractor persistently fails or refuses to perform the Work in accordance with this Contract, County may order Contractor to stop the Work immediately.

5.5 County's Right to Perform Work. If Contractor's work is stopped by County, and Contractor fails within seven (7) business days of such stoppage to provide adequate assurance to County that the cause of such stoppage will be eliminated or corrected, then County may, without prejudice to any other rights or remedies County may have against Contractor, proceed to perform the Work. County shall issue an appropriate Change Order deducting from the Contract Price the cost of correcting the deficiencies. If the unpaid portion of the Contract Price is insufficient to cover the amount due County, Contractor shall pay the difference to County within thirty (30) business days.

5.6 County's Right to Correct Defects. County shall give Contractor reasonably prompt notice of all observable defects. If Contractor fails to perform corrective work within a time determined by County, County may perform such work and charge Contractor for the costs incurred.

5.7 No Waiver of County's Legal Rights. Upon completion of the Work, County will promptly make final inspection and notify Contractor of final acceptance. However, final acceptance shall not preclude or estop County from correcting any measurement, estimate, or certificate made before or after completion of the Work, nor shall County be precluded or estopped from recovering overpayments from Contractor, or its surety, or both. A waiver on the part of County of any breach of any part of the Contract shall not be held to be a waiver of any other or subsequent breach.

5.8 County May Accept Defective or Nonconforming Work. County may choose to accept defective or nonconforming Work. In such event, the Contract Price shall be reduced by the greater of (a) the reasonable cost of removing and correcting the defective or nonconforming Work, and (b) the difference between the fair market value of the Project as constructed and the fair market value of the Project had it not been constructed in such a manner as to include defective or nonconforming Work. If the remaining portion of the unpaid Contract Price, if any, is insufficient to compensate County for its acceptance of defective or nonconforming Work, Contractor shall, upon

written demand from County, pay County such remaining compensation for accepting defective or nonconforming Work within thirty (30) business days.

ARTICLE VI
CONTRACTOR DUTIES

6.1 Consistent with Contractor's continuing duty set forth in Article I, Contractor shall perform no part of the Work at any time without adequate Contract Documents or, as appropriate, approved Shop Drawings, Product Data, or Samples for such portion of the Work. If Contractor performs any of the Work knowing it involves a recognized error, inconsistency, or omission in the Contract Documents without such notice to County, Contractor shall bear responsibility for such performance and shall bear the cost of correction.

6.2 Contractor shall supervise and direct the Work using Contractor's best skill, effort, and attention. Contractor shall be responsible to County for all acts or omissions of Contractor, its employees, subcontractors, and others engaged in the Work on behalf of Contractor.

6.3 Warranty. Contractor warrants to County that all labor furnished to progress the Work under this Contract will be competent to perform the tasks to meet the standards of workmanlike quality prevailing in North Carolina, that materials and equipment furnished will be of good quality, new, free from faults and defects, and in strict conformance with this Contract. All Work not conforming to these requirements may be considered defective. Contractor shall be responsible for all costs, damages and expenses including, but not limited to, penalties, fines and fees that County may incur because of Contractor's failure to perform under this Contract.

6.4 Supervision. Contractor shall employ and maintain competent supervisory personnel at the Project site. Absent written instruction from Contractor to the contrary, Contractor's designated superintendent shall be deemed Contractor's authorized representative at the site and shall be authorized to accept all communications from County.

6.5 Time of Performance Schedule. Contractor, within seven (7) days of award of Contract, shall submit to County, Contractor's schedule for completing the Work. Contractor's schedule shall be revised no less frequently than monthly, and updated with each Pay Application, and the Schedule shall be revised to reflect unexpected conditions or occurrences related to the entire Project. Document revisions shall be furnished to County for approval. Failure by Contractor to comply strictly with the provisions of this Paragraph shall constitute a material breach of this Contract.

6.6 Contractor shall continuously maintain at the site, for the benefit of County, one copy of this Contract marked to record on a current basis changes,

selections, and modifications made during construction. Additionally, Contractor shall maintain at the site the approved Shop Drawings, Product Data, Samples, and other similar required submittals. Upon Final Completion of the Work, all record documents shall be delivered to County.

6.7 Contractor shall not perform any portion of the Work requiring submittal and review of Shop Drawings, Product Data, or Samples unless and until County shall have approved the documents. Approval by County, however, shall not be evidence that the Work installed pursuant thereto conforms to the requirements of this Contract.

6.8 Cleaning the Site and the Project. Contractor shall keep the site clean during performance of the Work. Upon Final Completion of the Work, Contractor shall clean the site and the Project and remove all waste, together with all of Contractor's property.

6.9 Access to Work. County shall have access to the Work at all times from commencement of the Work through Final Completion. Contractor shall provide access to County when requested.

6.10 Permits and Licenses. County shall obtain the appropriate North Carolina Division of Coastal Management, North Carolina Division of Water Quality, and the U.S. Army Corps of Engineers permits and easements. Contractor shall procure all applicable permits and licenses, including permits and licenses required pursuant to applicable patent and copyright laws, shall pay all charges and fees, and shall give all notices necessary and incidental to the due and lawful prosecution to the work. There will be no charge for County building permits. Contractor shall obtain any and all U.S. Coast Guard dredge certifications and/or approvals as required to perform the work.

6.11. Indemnity. To the fullest extent permitted by law, Contractor shall indemnify and hold harmless County, its officers, officials, agents and employees and Gahagan & Bryant Associates of NC, PLLC, Engineer, from and against liability, claims, damages, losses and expenses, including attorneys' fees, arising out of or resulting from performance of the Work, provided that such liability, claims, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including loss of use resulting therefrom, but only to the extent caused in whole or in part by negligent acts or omissions of Contractor, anyone directly or indirectly employed by it or anyone for whose acts they may be liable, regardless of whether or not such liability, claim, damage, loss or expense is caused in part by County, its officers, officials, agents and employees.

The Contractor agrees that it will allow County and Engineer access to its dredge(s) and its attendant vessels and equipment during the performance of this contract and to use the Contractor's transportation facilities from shore to the said vessels and equipment on the condition and with the understanding and agreement that

in consideration for such authorization, they will not interfere with any employees of the Contractor while at work and does hereby agree to indemnify and hold the Contractor harmless from any and all injuries and damages that may be suffered and incurred when on or about the dredge, equipment and property of the Contractor, its agents, servants, or employees, due to actions by the County or Engineer while onboard said vessels.

ARTICLE VII
INSURANCE

7.1 Commercial General Liability. Contractor shall maintain Commercial General Liability (CGL) with a total limit of not less than \$5,000,000 each occurrence for bodily injury and property damage. If such CGL insurance contains a general aggregate limit, it shall apply separately to the Project or the general aggregate shall be twice the required limit. CGL insurance shall be written on Insurance Services Office (ISO) "occurrence" form CG 00 01 covering CGL or its equivalent and shall cover the liability arising from premises, operations, independent contractors, products-completed operations, personal and advertising injury, and liability assumed under an insured contract, including the tort liability of another assumed in a business contract.

County, its officers, officials, agents, and employees are to be covered as additional insureds under the CGL by endorsement CG 20 10 and CG 20 37 or an endorsement providing equivalent coverage with respect to liability arising out of activities performed by or on behalf of Contractor; products and completed operations of Contractor; premises owned, leased or used by Contractor; and under the commercial umbrella, if required by County. The coverage shall contain no special limitations on the scope of protection afforded to County, its officers, officials, agents, and employees. The status of County as an additional insured under a CGL obtained in compliance with this Contract shall not restrict coverage under such CGL with respect to the escape or release of pollutants at or from the Project site. There shall be no endorsement or modification of the CGL or Umbrella Liability limiting the scope of coverage for liability arising from pollution, explosion, collapse, underground property damage, employment-related practices, or damage to the named insured's work. Contractor shall maintain CGL and, if necessary Commercial Umbrella Liability insurance, both applicable to liability arising out of Contractor's completed operations, with a limit of not less than \$5,000,000 each occurrence for at least three (3) years following substantial completion of the Work. Contractor's CGL insurance shall be primary as to County, its officers, officials, agents, and employees. Any other insurance or self-insurance maintained by County, its officers, officials, agents, and employees shall be excess of and not contribute toward Contractor's insurance.

7.2 The Workers' Compensation and Employer's Liability. Contractor shall maintain Workers' Compensation as required by the State of North Carolina and Employer's Liability Insurance. The Employer's Liability, and if necessary, Commercial Umbrella Liability insurance shall not be less than \$5,000,000 each accident for bodily injury by accident, \$5,000,000 each employee for bodily injury by disease, and \$5,000,000 policy limit. The Insurer shall agree to waive all rights of subrogation against County, its officers, officials, agents, and employees for losses arising from the Work performed by Contractor for County.

The U.S. Longshore and Harborworkers Compensation Act endorsement shall be attached to the policy when the services will be on or in close proximity to navigable waterways. The Maritime Coverage endorsement (WC 00 02 01) shall be attached to the policy when the contracted services involve the use of watercraft.

7.3 Business Auto Liability. Contractor shall maintain Business Auto Liability and, if necessary, Commercial Umbrella Liability insurance with a limit of not less than \$5,000,000 combined single limit. Such insurance shall cover liability arising out of any auto, including owned, hired, and non-owned autos. Business Auto coverage shall be written on ISO form CA 00 01, or a substitute form providing equivalent liability coverage. If necessary, the policy shall be endorsed to provide contractual liability coverage equivalent to that provided in ISO form CA 00 01. Contractor's Business Auto Liability insurance shall be primary as to County, its officers, officials, agents, and employees. Any other insurance or self-insurance maintained by County, its officers, officials, agents, and employees shall be excess of and not contribute with Contractor's insurance.

7.4 Surety Bond - Performance & Payment Bonds. Contractor shall furnish and deliver to County a Payment Bond and a Performance Bond covering the faithful performance and completion of work included in this Contract and payment for all materials and labor furnished or supplied in connection with work included in this Contract. All bonds shall be issued and furnished to County prior to, and as a condition precedent to, commencement of the Work of this Contract. The Payment Bond and Performance Bond shall be furnished on behalf of Contractor, shall name County obligee, and shall be one hundred percent (100%) of the amount of the guaranteed repair and maintenance costs. Such bond(s) shall be solely for the protection of County. The Payment Bond and the Performance Bond shall be issued by a surety of financial standing having a rating from A.M. Best Company equal to or better than A and must be included on the approved list of sureties issued by the United States Department of Treasury. The bond shall remain in effect at least one (1) year after the date when final payment is made. The surety bond must be in the form set forth in N.C.G.S. 44A-33, without any variations therefrom. Contractor shall provide surety bond wherein Surety waives notice of all modifications, omissions, additions, changes and advance payments or deferred payments in or about the Contract, and agrees that the

obligations undertaken by the Bond shall not be impaired in any manner due to any modifications, omissions, additions, changes, and advance payments or deferred payments. The surety bond must set forth no requirement that suit be initiated prior to the time stipulated in applicable North Carolina Statutes of Limitation.

7.5 Deductibles and Self-Insured Retentions. Contractor shall be solely responsible for the payment of all deductibles to which such policies are subject, whether or not County is an insured under the policy.

7.6 Miscellaneous Insurance Provisions: The policies are to contain, or be endorsed to contain, the following provisions: Any failure to comply with reporting provisions of the policies listed in this Contract shall not affect coverage provided to County, its officers, officials, agents, and employees. Each insurance policy required by this contract shall be endorsed to state that coverage shall not be canceled by either party except after thirty (30) days prior written notice has been given to New Hanover Risk Management, 230 Government Center Drive, Ste. 125, Wilmington, North Carolina, 28403.

If Contractor's liability policies do not contain the standard ISO separation of insureds provision, or a substantially similar clause, they shall be endorsed to provide cross-liability coverage.

7.7 Acceptability of Insurers. Insurance is to be placed with insurers licensed to do business in the State of North Carolina with an A.M. Best's rating of no less than A VII unless specific approval has been granted by County.

7.8 Evidence of Insurance. Contractor shall furnish County with a certificate(s) of insurance, executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements prior to commencing the Work, and thereafter upon renewal or replacement of each certified coverage until all the Work under this contract are deemed complete. Evidence of additional insured status shall be noted on the certificate of insurance as per requirements in this Contract. Insurance maintained after final payment evidencing such coverage shall be provided to County with final application for payment and thereafter upon renewal or replacement of such insurance until the expiration of the two-year period for which such insurance must be maintained.

7.9 Subcontractors. Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates for each subcontractor. All coverage for subcontractors shall be subject to all of the requirements stated herein. CCL coverage shall include Independent Contractors' coverage, and Contractor shall be responsible for assuring that all subcontractors are properly insured.

7.10 Conditions. The insurance required for this Contract must be on forms acceptable to County. County may accept, at its discretion, letters of credit or custodial accounts in lieu of specific insurance requirements. Contractor shall provide that the insurance contributing to satisfaction of insurance requirements in this Contract

shall not be canceled, terminated, or modified by Contractor without prior written approval of County. Contractor shall promptly notify New Hanover County Property Management and New Hanover County Risk Management at (910) 798-7498 of any accidents arising in the course of operations under the Contract causing bodily injury or property damage.

County reserves the right to obtain complete, certified copies of all required insurance policies, at any time. Failure of County to demand a certificate of insurance or other evidence of full compliance with these insurance requirements or failure of County to identify a deficiency from evidence that is provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance. By requiring insurance herein, County does not represent that coverage and limits will necessarily be adequate to protect Contractor and such coverage and limits shall not be deemed as a limitation of Contractor's liability under the indemnities granted to County in this Contract. If Contractor fails to maintain the insurance as set forth herein, County shall have the right, but not the obligation, to purchase said insurance at Contractor's expense. County shall have the right, but not the obligation, of prohibiting Contractor or any subcontractor from entering the Project site or withholding payment until such certificates or other evidence that insurance has been placed in complete compliance with these requirements is received and approved by County.

ARTICLE VIII

CLAIMS

8.1 Claims by Contractor. All Contractor claims shall be initiated by written notice and claim to County. Such written notice and claim must be furnished within seven (7) calendar days after occurrence of the event, or the first appearance of the condition, giving rise to the claim.

8.2 Contractor's Duty to Continue Work. Pending final resolution of any claim of Contractor, Contractor shall diligently proceed with performance of this Contract. The resolution of any claim under this Paragraph shall be reflected by a Change Order executed by County and Contractor.

8.3 Claims for Concealed and Unknown Conditions. Should concealed and unknown conditions encountered in the performance of the Work (a) below the surface of the ground or (b) in an existing structure be at variance with the conditions indicated by this Contract, or should unknown conditions of an unusual nature differing materially from those ordinarily encountered in the area and generally recognized as inherent in the Work of the character provided for in this Contract be encountered, the Contract Price shall be equitably adjusted by Change Order upon the written notice and claim by either party made within seven (7) calendar days after the first observance of

the condition. As a condition precedent to County having any liability to Contractor for concealed or unknown conditions, Contractor must give County written notice of, and an opportunity to observe, the condition prior to disturbing it. The failure by Contractor to make the written notice and claim as provided in this subparagraph shall constitute a waiver by Contractor of any claim arising out of or relating to such concealed or unknown condition.

8.4 Claims for Additional Costs. If Contractor wishes to make a claim for an increase in the Contract Sum, it shall give County written notice thereof within seven (7) calendar days after the occurrence of the event giving rise to such claim. Such notice shall be given by Contractor before proceeding to execute any additional or changed work. The failure by Contractor to give such notice and to give such notice prior to executing the Work shall constitute a waiver of any claim for additional compensation. No such claim shall be valid unless so made.

8.4.1 In connection with any claim by Contractor against County for compensation in excess of the Contract Price, any liability of County for Contractor's costs shall be strictly limited to direct costs incurred by Contractor and shall in no event include Contractor's indirect costs or consequential damages. County shall not be liable to Contractor for claims of third parties, including subcontractors, unless and until liability of Contractor has been determined in a court of competent jurisdiction.

8.5 Claims for Additional Time. If Contractor is delayed in progressing any task which at the time of the delay is then critical or which during the delay becomes critical, as the sole result of any act or neglect to act by County or someone acting in County's behalf, or by changes ordered in the Work, unusual delay in transportation, unusually adverse weather conditions not reasonably anticipatable, fire or any causes beyond Contractor's control, then the date for achieving Substantial Completion of the Work shall be extended upon the written notice and claim of Contractor to County, for such reasonable time as County may determine by written change order. Any notice and claim for an extension of time by Contractor shall be made not more than seven (7) calendar days after the occurrence of the event or the first appearance of the condition giving rise to the claim and shall set forth in detail Contractor's basis for requiring additional time in which to complete the Project. In the event the delay to Contractor is a continuing one, only one notice and claim for additional time shall be necessary. If Contractor fails to make such claim as required in this Subparagraph, any claim for extension of time shall be waived.

8.5.1 If Contractor is delayed in the progress of the Work for any reason, including any act or neglect of County, any of its officers, officials, employers or agents, or any separate contractor employed by County, an extension of time shall be Contractor's exclusive remedy and Contractor waives any right it may otherwise have to damages because of delays or disruptions of any nature whatsoever to all or any part of the Work including, that this provision in itself shall not preclude Contractor from

recovering damages for delays solely by acts of County or its officers, officials, agents, or employees.

8.6 Conflict of Interest. No party to this Contract shall acquire or possess any interest, either direct or indirect, in any aspect of the subject property to be constructed or renovated hereunder.

ARTICLE IX SUBCONTRACTORS

9.1 Subcontractors. A Subcontractor is an entity that has a direct contract with Contractor to perform a portion of the Work.

9.2 Award of Subcontracts. Upon execution of the Contract, Contractor shall furnish County, in writing, the names of persons or entities proposed by Contractor to act as a subcontractor on the Project. County shall within ten (10) calendar days reply to Contractor, in writing, stating any objections County may have to such proposed subcontractor. Contractor shall not enter into a subcontract with a proposed subcontractor to whom County has made timely objection. Contractor shall not be required to subcontract with any party to whom Contractor has objection.

9.2.1 All subcontracts shall afford Contractor rights against the subcontractor, which correspond to those rights afforded to County against Contractor herein, including those rights afforded to County hereunder by the Subparagraphs captioned Termination by County.

ARTICLE X TERMINATION

10.1 Termination by Contractor. If the Work is stopped for a period of ninety (90) days by an order of any court or other public authority, or as a result of an act of the Government, through no fault of Contractor or any person or entity working directly or indirectly for Contractor, Contractor may, upon ten (10) calendar days' written notice to County terminate performance under this Contract and recover from County payment for the actual reasonable expenditures of Contractor for all Work executed and for materials, equipment, tools, construction equipment and machinery actually purchased or rented solely for the Work, less any salvage value of any such items.

10.1.1 If County shall persistently or repeatedly fail to perform any material obligation to Contractor for a period of fifteen (15) calendar days after receiving written notice from Contractor of its intent to terminate, Contractor may terminate performance under this Contract by written notice to County. In such event, Contractor shall be

entitled to recover from County as though County had terminated Contractor's performance.

10.2 Termination by County For Convenience. County may for any reason whatsoever terminate performance under this Contract by Contractor for convenience. County shall give written notice of such termination to Contractor specifying when termination becomes effective.

10.2.1 Contractor shall incur no further obligations in connection with the Work and Contractor shall stop Work when such termination becomes effective. Contractor shall also terminate outstanding orders and subcontracts. Contractor shall settle the liabilities and claims arising out of the termination of subcontracts and orders. County may direct Contractor to assign Contractor's right, title, and interest under terminated orders or subcontracts to County or its designee.

10.2.2 Contractor shall transfer title and deliver to County such completed or partially completed Work and materials, equipment, parts, fixtures, information and Contract rights Contractor controls or possesses.

10.2.3 (a) Contractor shall submit a termination claim to County specifying the amounts due because of the termination for convenience together with costs, pricing or other data required by County. If Contractor fails to file a termination claim within one (1) year from the effective date of termination, County shall pay Contractor, an amount derived in accordance with subparagraph [c] below.

(b) County and Contractor may agree to the compensation, if any, due to Contractor.

(c) Absent agreement to the amount due to Contractor, County shall pay Contractor the following amounts:

(i) Contract prices for labor, materials, equipment, and other services accepted under this Contract.

(ii) Reasonable costs incurred in preparing to perform and in performing the terminated portion of the Work, and in terminating Contractor's performance, plus a fair and reasonable allowance for overhead and profit thereon (such profit shall not include anticipated profit or consequential damages); provided however, that if it appears that Contractor would have not profited or would have sustained a loss if the entire Contract would have been completed, no profit shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss, if any;

(iii) Reasonable costs of settling and paying claims arising out of the termination of subcontracts or orders pursuant hereto.

10.3 Termination by County For Cause. If Contractor persistently or repeatedly refuses or fails to prosecute the Work in a timely and/or competent manner, supply enough properly skilled workers, supervisory personnel or proper equipment or materials, or if it fails to make prompt payment to subcontractors or for materials or

labor, or persistently disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, or otherwise is guilty of a substantial violation of a material provision of this Contract, then County may by written notice to Contractor, without prejudice to any other right or remedy, terminate the employment of Contractor and take possession of the site and of all materials owned by County and may finish the Work by whatever methods it may deem expedient. Contractor shall not be entitled to receive any further payment until the Work is finished.

10.3.1 If the unpaid balance of the Contract Price exceeds the cost of finishing the work, including compensation for County's additional services and expenses made necessary thereby, such excess shall be paid to Contractor. If such cost exceeds the unpaid balance, Contractor shall pay the difference to County. This obligation for payment shall survive the termination of the Contract.

10.3.2 In the event County terminates the employment of Contractor for cause and it is subsequently determined by a Court of competent jurisdiction that such termination was without cause, such termination shall thereupon be deemed a Termination for Convenience, such termination shall thereupon be deemed a Termination for Convenience.

ARTICLE XI

COMPLIANCE WITH LAWS

11.1 Laws To Be Observed. Contractor shall observe and comply with all Federal and State laws, including Department of Labor Health and Safety Regulations, and all local laws, ordinances and regulations, which in any way affect the Work. Contractor shall have the duty to maintain safety on the job site. OSHA or other Federal, State or Local laws, rules or regulations pertaining to safety shall be the sole responsibility of Contractor. Contractor shall indemnify and hold County harmless for any safety violations assessed against County.

11.2 Underground Damage Prevention. Contractor shall comply with N.C.G.S. Chapter 87, Article 8 and shall be responsible for costs of repair to all utilities damaged during construction.

11.3 Taxes. Contractor shall pay all applicable Federal, State, and Local taxes, including sales taxes on all equipment and materials used on the Project. County is qualified to receive all sales taxes paid on the project as a rebate. Contractor shall submit a statement showing the invoice and sales taxes paid to any governmental entity of all materials and equipment used at the Project. A tax statement shall be submitted with each Pay Application and shall be accompanied by an affidavit verifying validation.

11.4. Contractor Non-Discrimination. Contractor will take affirmative action not to discriminate against any employee or applicant for employment or

otherwise illegally deny any person participation in or the benefits of the activities that are the subject of this Contract, because of race, creed, color, sex, age, disability, or national origin.

11.5 Goal for Participation by Minority Businesses. It is the policy of County that minority businesses shall have the maximum opportunity to participate in the performance of contracts financed with public money including contracts awarded pursuant to the requirements of N.C.G.S Chapter 143, Article 8. County has adopted a ten percent (10%) verifiable goal for participation by minority businesses in the total value of work required by the terms and conditions of this Contract. Contractor covenants and agrees to comply with County policy the provisions of N.C.G.S. Chapter 143, Article 8, and shall follow County guidelines specifying the actions Contractor must take to ensure a good faith effort in the recruitment and selection of minority businesses for participation in this Contract.

11.6 E-Verify Compliance. Pursuant to S.L. 2015-294, Contractor shall fully comply with the U.S. Department of Homeland Security employee legal status E-Verify requirements for itself and all its subcontractors. Violation of the provision, unless timely cured, shall constitute a breach of contract.

ARTICLE XII **INTERPRETATION**

12.1 Intent and Interpretation. The intent of this Contract is to require complete, correct, and timely execution of the Work. Any work that may be required, implied, or inferred by the Contract Documents, as necessary to produce the intended result shall be provided by Contractor for the contract price.

12.2. Law Applied. All of the terms and conditions contained in the Contract Documents shall be interpreted in accordance with the laws of the State of North Carolina.

12.3 Entire Agreement. This Contract and Contract Documents constitute the entire understanding of the parties. The Contract Documents shall be given precedence in the following order: Agreement, Modifications, Addenda, Supplementary Conditions, Special Conditions, Instructions to Bidders, Contract Provisions, Technical Specifications, Appendices, and Drawings.

12.4 Interpretation and Construction. When a word, term, or phrase is used in this Contract, it shall be interpreted or construed first, as defined herein; second, if not defined, according to its generally accepted meaning in the construction industry; and third, if there is no generally accepted meaning in the construction industry, according to its common and customary usage. As between numbers and scaled measurements on the Drawings and in the Design, the numbers shall govern; as between larger scale and smaller scale drawings, the larger scale shall govern.

12.4.1 The words "include," "includes," or "including", as used in this contract, shall be deemed to be followed by the phrase, "without limitation".

12.4.2 Words or terms used as nouns in this Contract shall be inclusive of their singular and plural forms, unless the context of their usage clearly requires a contrary meaning.

12.4.3 The specification herein of any act, failure, refusal, omission, event, occurrence, or condition as constituting a material breach of this contract shall not imply that any other, non-specified act, failure, refusal, omission, event, occurrence, or condition shall be deemed not to constitute a material breach of this Contract.

12.5 Dispute Resolution. County hereby adopts those dispute resolutions procedures promulgated by the State Building Commission, as amended from time to time by the Commission or County. Said procedures shall be available to address any issues arising out of the contract or construction process wherein the matter in controversy exceeds Fifteen Thousand (\$15,000.00) Dollars. Should Contractor herein utilize such dispute resolution procedures it must pay half of all costs incurred by County in conducting the dispute resolution.

12.6 Arbitration. Arbitration of claims, disputes, and questions arising under this Contract may only be used when both parties agree to arbitrate. Arbitration shall be in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association. In no event shall fewer than three (3) arbitrators be used; County and Contractor shall each select one (1) arbitrator and the two (2) arbitrators shall select the third. The award rendered by the arbitrators shall be final, specifically enforceable, and recordable as a judgment in any court having jurisdiction.

12.7 County Non-Discrimination. County covenants and agrees that no person shall be denied benefits of, or otherwise be subjected to discrimination in connection with County's performance under this Contract on the grounds of race, religion, color, national origin, sex or handicap.

12.8 Notices. All notices required hereunder to be sent to either party shall be sent to the following designated addresses, or to such other address or addresses as may hereafter be designated by either party by mailing of written notice of such change of address, by Certified Mail, Return Receipt Requested:

To County:
New Hanover County Engineering
Attn: Layton Bedsole
230 Government Center Drive, Suite 160
Wilmington, NC 28403

To Contractor:

12.9 Contract Under Seal. The parties hereto expressly agree to create a contract under seal.

IN WITNESS WHEREOF, the parties have affixed their hands and seals and caused the execution of this instrument, by authority duly given and on the day and year first above written.

NEW HANOVER COUNTY

[SEAL]

Beth Dawson, Chairwoman

ATTEST:

Clerk to the Board

CONTRACTOR

[CORPORATE SEAL]

President

ATTEST:

Secretary

This instrument has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act.

Approved as to form:

County Finance Director

County Attorney

STATE OF NORTH CAROLINA
NEW HANOVER COUNTY

I, _____, a Notary Public of the State and County aforesaid, certify that Teresa P. Elmore personally came before me this day and acknowledged that she is Clerk to the Board of County Commissioners of New Hanover County, and that by authority duly given and as the act of the Board, the foregoing instrument was signed in its name by Beth Dawson, Chairwoman, sealed with its official seal and attested by herself as its Clerk.

WITNESS my hand and official seal, this ____ day of _____, 2016.

My commission expires: _____

Notary Public

STATE OF _____

COUNTY OF _____

I, _____, a Notary Public of the State and County aforesaid, certify that _____, personally came before me this day and acknowledged that (s)he is Secretary of _____, and that by authority duly given and as the act of the corporation, the foregoing instrument was signed in its name by its President, sealed with its official seal and attested by herself as its Secretary.

WITNESS my hand and official seal, this ____ day of _____, 2016.

Notary Public

My commission expires: _____

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C. SEDIMENT ANALYSIS

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*AIWW Maintenance Dredging Project
Mason Creek Crossing*

**Channel Centerline Sediment Samples
Grain Size Analysis**

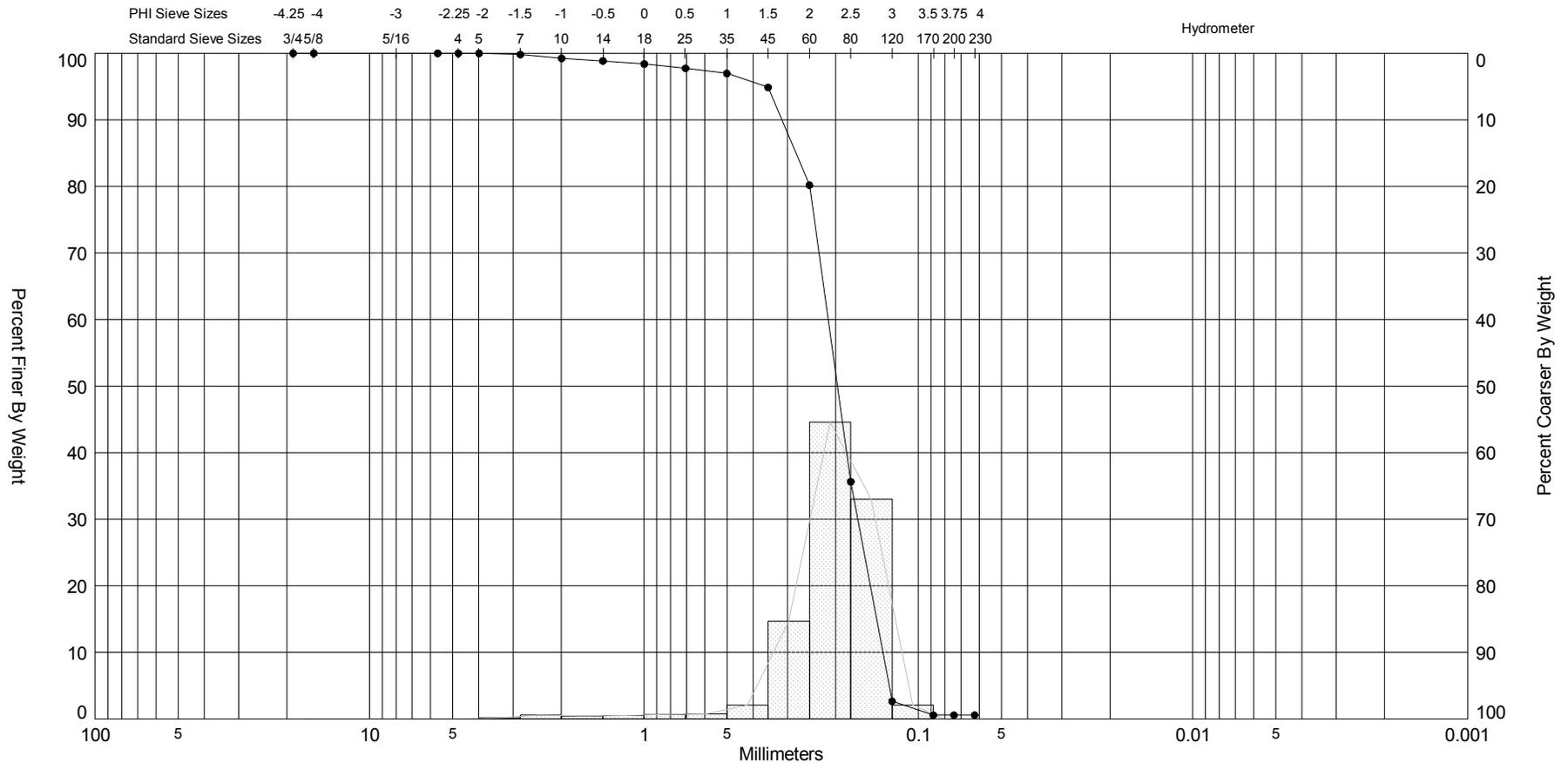
September 2016

(Surface Grab Samples)

Sample ID	Channel Station	Easting (X)	Northing (Y)	Mean Grain Size (mm)	% Silt Content (#230)
AIWW-1	57+00	2,368,078	183,945	0.21	0.57%
AIWW-2	87+00	2,368,035	184,221	0.24	0.19%
AIWW-3	92+00	2,368,329	184,625	0.20	0.47%
Project Composite				0.21	0.41%

**Coordinates referenced to North Carolina State Plane NAD 83

SIEVE ANALYSIS AIWW MAINTENANCE DREDGING PROJECT.GPJ FL DEP ROSS.GDT 9/30/16



Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
57+00	—●—		SP	#200 - 0.57 #230 - 0.57			2.34	2.27	-2.75	15.32	0.61	Project Name:	AIWW Maintenance Dredging Project
Comments:												Collection Date:	09-28-16
Depths and elevations based on measured values												Analyzed By:	DCJ
												Easting (X, ft):	2,368,078.00
												Northing (Y, ft):	183,945.00
												Horizontal System:	NAD 1983
												Vertical System:	
Gahagan and Bryant Associates Inc. Tampa, FL 33629 ph 813-831-4408 fax 813-831-4216													

Granularmetric Report

Depths and elevations based on measured values



Gahagan and Bryant Associates Inc.
Tampa, FL 33629
ph 813-831-4408
fax 813-831-4216

Project Name: AIWW Maintenance Dredging Project

Sample Name: 57+00

Collection Date: 09-28-16

Analyzed By: DCJ

Easting (ft): 2,368,078.00	Northing (ft): 183,945.00	Coordinate System: North Carolina State Plane	Elevation (ft):
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USCS: SP	Munsell: Dry - 2.5-8/1	Comments:
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Dry Weight (g): 105.50	Wash Weight (g): 105.50	Pan Retained (g):	Sieve Loss (%): 0.00	Fines (%): #200 - 0.57 #230 - 0.57	Organics (%):	Carbonates (%):	Shells (%):
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Weight Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.00	0.00	0.00	0.00
7	-1.50	2.83	0.20	0.19	0.20	0.19
10	-1.00	2.00	0.60	0.57	0.80	0.76
14	-0.50	1.41	0.40	0.38	1.20	1.14
18	0.00	1.00	0.50	0.47	1.70	1.61
25	0.50	0.71	0.70	0.66	2.40	2.27
35	1.00	0.50	0.80	0.76	3.20	3.03
45	1.50	0.35	2.20	2.09	5.40	5.12
60	2.00	0.25	15.50	14.69	20.90	19.81
80	2.50	0.18	47.00	44.55	67.90	64.36
120	3.00	0.13	34.80	32.99	102.70	97.35
170	3.50	0.09	2.20	2.09	104.90	99.43
200	3.75	0.07	0.00	0.00	104.90	99.43
230	4.00	0.06	0.00	0.00	104.90	99.43

% Pebble- 0.00	% Granule- 0.76	% Silt- 0.57
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% Very Coarse Sand 0.85	% Coarse Sand 1.42	% Medium Sand 16.78	% Fine Sand 77.54	% Very Fine Sand 2.09
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Phi 5 2.96	Phi 16 2.80	Phi 25 2.66	Phi 50 2.34	Phi 75 2.06	Phi 84 1.87	Phi 95 1.47
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Moment Statistics	Mean Phi 2.27	Mean mm 0.21	Sorting 0.61	Skewness -2.75	Kurtosis 15.32
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GRANULARMETRIC REPORT AIWW MAINTENANCE DREDGING PROJECT.GPJ FL DEP ROSS.GDT 9/30/16

Granularmetric Report

Depths and elevations based on measured values



Gahagan and Bryant Associates Inc.
Tampa, FL 33629
ph 813-831-4408
fax 813-831-4216

Project Name: AIWW Maintenance Dredging Project

Sample Name: 87+00

Collection Date: 09-28-16

Analyzed By: DCJ

Easting (ft): 2,368,035.00	Northing (ft): 184,221.00	Coordinate System: North Carolina State Plane	Elevation (ft):
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USCS: SP	Munsell: Dry - 2.5-8/1	Comments:
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Dry Weight (g): 107.30	Wash Weight (g): 107.30	Pan Retained (g):	Sieve Loss (%): 0.00	Fines (%): #200 - 0.19 #230 - 0.19	Organics (%):	Carbonates (%):	Shells (%):
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Weight Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.00	0.00	0.00	0.00
7	-1.50	2.83	0.00	0.00	0.00	0.00
10	-1.00	2.00	0.30	0.28	0.30	0.28
14	-0.50	1.41	0.80	0.75	1.10	1.03
18	0.00	1.00	0.90	0.84	2.00	1.86
25	0.50	0.71	1.00	0.93	3.00	2.80
35	1.00	0.50	1.50	1.40	4.50	4.19
45	1.50	0.35	2.50	2.33	7.00	6.52
60	2.00	0.25	30.00	27.96	37.00	34.48
80	2.50	0.18	56.60	52.75	93.60	87.23
120	3.00	0.13	13.10	12.21	106.70	99.44
170	3.50	0.09	0.40	0.37	107.10	99.81
200	3.75	0.07	0.00	0.00	107.10	99.81
230	4.00	0.06	0.00	0.00	107.10	99.81

% Pebble- 0.00	% Granule- 0.28	% Silt- 0.19
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% Very Coarse Sand	% Coarse Sand	% Medium Sand	% Fine Sand	% Very Fine Sand
1.58	2.33	30.29	64.96	0.37

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.82	2.47	2.38	2.15	1.83	1.67	1.17

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	2.06	0.24	0.56	-2.43	12.47

GRANULARMETRIC REPORT AIWW MAINTENANCE DREDGING PROJECT.GPJ FL DEP ROSS.GDT 9/30/16

Granularmetric Report

Depths and elevations based on measured values



Gahagan and Bryant Associates Inc.
Tampa, FL 33629
ph 813-831-4408
fax 813-831-4216

Project Name: AIWW Maintenance Dredging Project

Sample Name: 92+00

Collection Date: 09-28-16

Analyzed By: DCJ

Easting (ft): 2,368,329.00	Northing (ft): 184,625.00	Coordinate System: North Carolina Stae Plane	Elevation (ft):
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USCS: SP	Munsell: Dry - 2.5-8/1	Comments:
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Dry Weight (g): 106.20	Wash Weight (g): 106.20	Pan Retained (g):	Sieve Loss (%): 0.00	Fines (%): #200 - 0.47 #230 - 0.47	Organics (%):	Carbonates (%):	Shells (%):
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Weight Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.00	0.00	0.00	0.00
7	-1.50	2.83	0.00	0.00	0.00	0.00
10	-1.00	2.00	0.60	0.56	0.60	0.56
14	-0.50	1.41	0.60	0.56	1.20	1.13
18	0.00	1.00	0.70	0.66	1.90	1.79
25	0.50	0.71	0.80	0.75	2.70	2.54
35	1.00	0.50	0.80	0.75	3.50	3.30
45	1.50	0.35	1.70	1.60	5.20	4.90
60	2.00	0.25	9.50	8.95	14.70	13.84
80	2.50	0.18	43.90	41.34	58.60	55.18
120	3.00	0.13	42.60	40.11	101.20	95.29
170	3.50	0.09	4.50	4.24	105.70	99.53
200	3.75	0.07	0.00	0.00	105.70	99.53
230	4.00	0.06	0.00	0.00	105.70	99.53

% Pebble- 0.00	% Granule- 0.56	% Silt- 0.47
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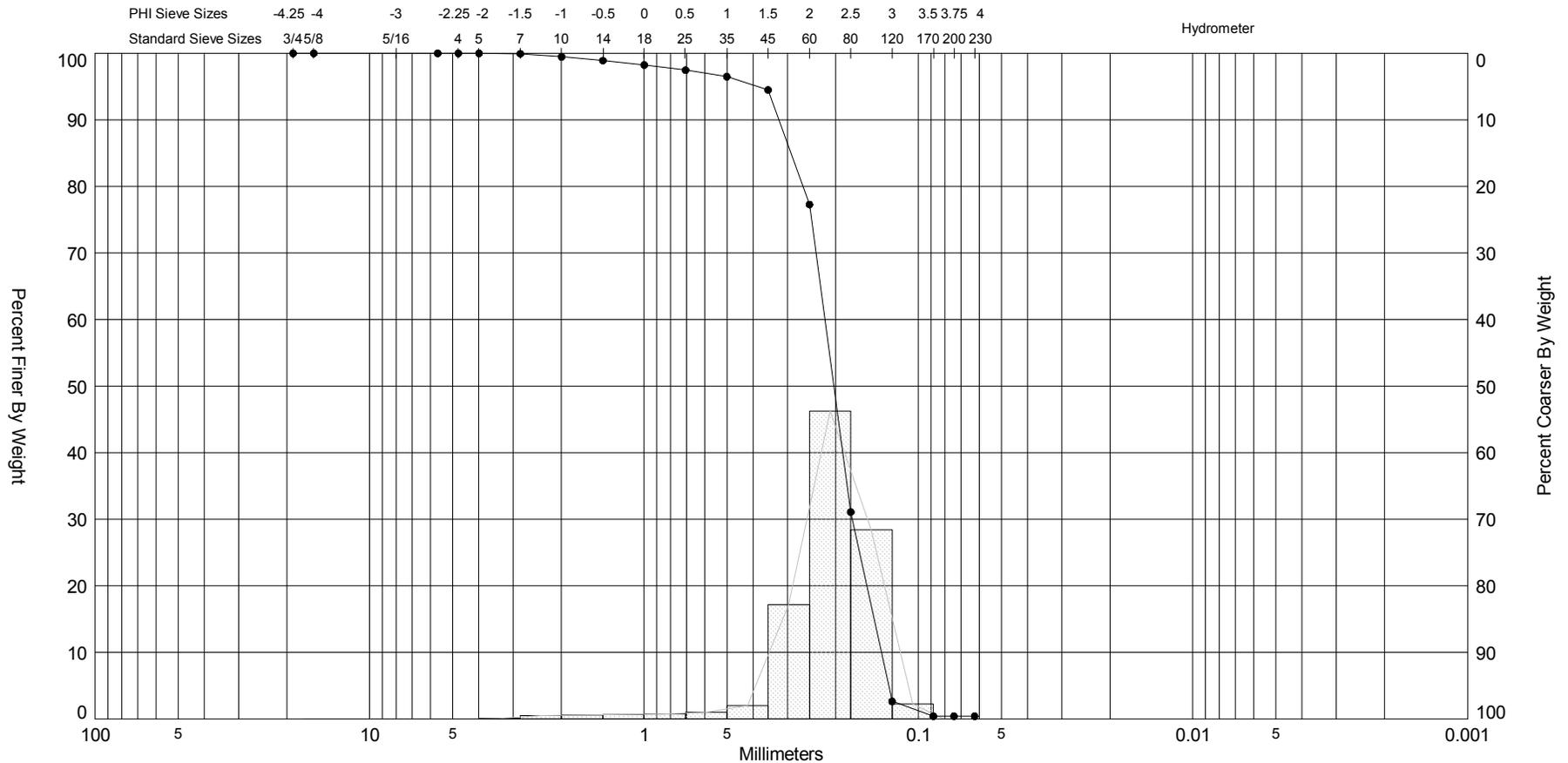
% Very Coarse Sand 1.22	% Coarse Sand 1.51	% Medium Sand 10.55	% Fine Sand 81.45	% Very Fine Sand 4.24
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Phi 5 3.00	Phi 16 2.86	Phi 25 2.75	Phi 50 2.44	Phi 75 2.13	Phi 84 2.03	Phi 95 1.51
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Moment Statistics	Mean Phi 2.35	Mean mm 0.20	Sorting 0.62	Skewness -2.72	Kurtosis 14.21
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GRANULARMETRIC REPORT AIWW MAINTENANCE DREDGING PROJECT.GPJ FL DEP ROSS.GDT 10/10/16

SIEVE ANALYSIS AIWW MAINTENANCE DREDGING PROJECT.GPJ FL DEP ROSS.GDT 9/30/16



Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
Composite	—●—		SP	#200 - 0.41 #230 - 0.41			2.3	2.23	-2.45	13	0.61	Project Name:	AIWW Maintenance Dredging Project
Comments:												Collection Date:	09-30-16
Depths and elevations based on measured values												Analyzed By:	DCJ
							Gahagan and Bryant Associates Inc. Tampa, FL 33629 ph 813-831-4408 fax 813-831-4216					Easting (X, ft):	
												Northing (Y, ft):	
												Horizontal System:	NAD 1983
												Vertical System:	

Granularmetric Report

Depths and elevations based on measured values



Gahagan and Bryant Associates Inc.
Tampa, FL 33629
ph 813-831-4408
fax 813-831-4216

Project Name: AIWW Maintenance Dredging Project

Sample Name: Composite

Collection Date: 09-30-16

Analyzed By: DCJ

Easting (ft):

Northing (ft):

Coordinate System:

Elevation (ft):

North Carolina State Plane

USCS:

SP

Munsell:

Dry - 2.5-8/1

Comments:

Dry Weight (g):

100.00

Wash Weight (g):

100.00

Pan Retained (g):

0.00

Sieve Loss (%):

0.00

Fines (%):

#200 - 0.41
#230 - 0.41

Organics (%):

Carbonates (%):

Shells (%):

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Weight Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.00	0.00	0.00	0.00
7	-1.50	2.83	0.06	0.06	0.06	0.06
10	-1.00	2.00	0.47	0.47	0.53	0.53
14	-0.50	1.41	0.56	0.56	1.10	1.10
18	0.00	1.00	0.66	0.66	1.75	1.75
25	0.50	0.71	0.78	0.78	2.53	2.53
35	1.00	0.50	0.97	0.97	3.50	3.50
45	1.50	0.35	2.01	2.01	5.51	5.51
60	2.00	0.25	17.20	17.20	22.71	22.71
80	2.50	0.18	46.21	46.21	68.92	68.92
120	3.00	0.13	28.44	28.44	97.36	97.36
170	3.50	0.09	2.23	2.23	99.59	99.59
200	3.75	0.07	0.00	0.00	99.59	99.59
230	4.00	0.06	0.00	0.00	99.59	99.59

% Pebble- 0.00

% Granule- 0.53

% Silt- 0.41

% Very Coarse Sand

% Coarse Sand

% Medium Sand

% Fine Sand

% Very Fine Sand

1.22

1.75

19.21

74.65

2.23

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.96

2.77

2.61

2.30

2.02

1.80

1.37

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

2.23

0.21

0.61

-2.45

13

GRANULARMETRIC REPORT AIWW MAINTENANCE DREDGING PROJECT.GPJ FL DEP ROSS.GDT 9/30/16

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D. PERMITS

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Permit Class
MODIFICATION/MINOR

Permit Number
151-01

STATE OF NORTH CAROLINA
Department of Environmental Quality
and
Coastal Resources Commission

Permit

for

Major Development in an Area of Environmental Concern
pursuant to NCGS 113A-118

Excavation and/or filling pursuant to NCGS 113-229

Issued to New Hanover County, 230 Government Center Drive, Suite 160, Wilmington, NC 28403

Authorizing development in New Hanover County at Mason Inlet, adj. Atlantic Ocean, Mason Creek and AIWW, as requested in the permittee's letter dated 8/2/16, including the attached workplan drawings (9), all dated received by the DCM Wilmington office on 8/2/16.

This permit, issued on September 21, 2016, is subject to compliance with the application (where consistent with the permit), all applicable regulations, special conditions and notes set forth below. Any violation of these terms may be subject to fines, imprisonment or civil action; or may cause the permit to be null and void.

- 1) Unless specifically altered herein, this Minor Modification authorizes the excavation of the AIWW reaches and the 90' AIWW widener at the Mason Inlet AIWW Crossing.

Excavation

- 2) All excavation activities shall take place entirely within the areas indicated on attached workplan drawings.
- 3) Excavation shall not exceed -14 MLW (-12' with a -2' overdredge allowance).

(See attached sheets for Additional Conditions)

This permit action may be appealed by the permittee or other qualified persons within twenty (20) days of the issuing date.

This permit must be accessible on-site to Department personnel when the project is inspected for compliance.

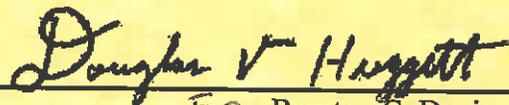
Any maintenance work or project modification not covered hereunder requires further Division approval.

All work must cease when the permit expires on

December 31, 2020

In issuing this permit, the State of North Carolina agrees that your project is consistent with the North Carolina Coastal Management Program.

Signed by the authority of the Secretary of DEQ and the Chairman of the Coastal Resources Commission.



FOR Braxton C. Davis, Director
Division of Coastal Management

This permit and its conditions are hereby accepted.



Signature of Permittee

ADDITIONAL CONDITIONS

- 5) Excavation shall be accomplished by a hydraulic dredge. Use of any other method of excavation shall require modification of this permit.
- 6) In order to prevent leakage, dredge pipes shall be routinely inspected. If leakage is found and repairs cannot be made immediately, pumping of material shall stop until such leaks are fixed.

NOTE: The permittee's contractor is advised to contact the U.S. Coast Guard at (910) 815-4895, ext. 108 to discuss operations and appropriate lighting, markers, etc. for all dredge equipment.

Maintenance Clause

- 7) The Division of Coastal Management will be notified in writing at least two (2) weeks in advance of any maintenance work authorized by this permit and that notification include:
 - a. The number of the original permit
 - b. A statement that no dimensional changes are proposed
 - c. A copy of the original permit plan(s) with cross-hatching indicating the area to be maintained and the area to be used for dredge spoil, and the estimated amount of material to be removed.
 - d. The date of plan revision and the permittee's signature shown anew on the original plan

Spoil Disposal

- 8) All excavated materials shall be confined above normal high water and landward of regularly or irregularly flooded marsh behind adequate dikes or other retaining structures to prevent spillover of solids into any marsh or surrounding waters.
- 9) The disposal area effluent shall be contained by pipe, trough, or similar device to a point at or beyond the normal low water level to prevent gully erosion and unnecessary siltation.
- 10) The terminal end of the pipeline shall be positioned at or greater than 50 feet from any part of the dike and a maximum distance from spillways to allow settlement of suspended sediments.
- 11) A water control structure shall be installed at the intake end of the effluent pipe to assure compliance with water quality standards.
- 12) The diked disposal area shall be constructed a sufficient distance from the normal high water level or any marsh to eliminate the possibility of dike erosion into surrounding wetlands or waters.
- 13) The spoil area shall be inspected and approved by the Division of Coastal Management prior to the beginning of any dredge activities.

General

- 14) The permittee shall obtain any required approvals from the US Army Corps of Engineers for the authorized activities, including use of the ACOE confined disposal facility #241.

ADDITIONAL CONDITIONS

- 15) This Minor Modification shall be attached to the original of Permit No. 151-01, which was issued on 11/28/01, as well as all subsequent modifications, refinements and renewals, and copies of all documents shall be readily available on site when Division personnel inspect the project for compliance.
- 16) All conditions and stipulations of the active permit remain in force, including all timing restrictions, under this minor modification unless altered herein.

NOTE: This permit does not eliminate the need to obtain any additional state, federal or local permits, approvals or authorizations that may be required.

NOTE: A minor modification application processing fee of \$100 was received by DCM for this project.



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403-1343

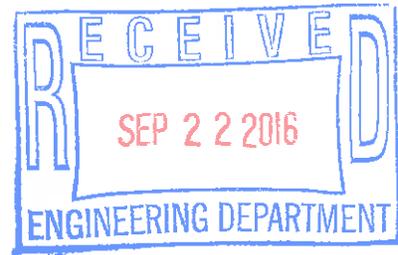
September 19, 2016

Regulatory Division

Action ID No. SAW-1999-01052, General Permit No. 199602878

Mr. Jim Iannucci, Director
New Hanover County Engineering Department
230 Government Center Drive, Suite 160
Wilmington, North Carolina 28403

Mr. Layton Bedsole, Shore Protection Coordinator
New Hanover County Engineering Department
230 Government Center Drive, Suite 160
Wilmington, North Carolina 28403



Dear Messrs. Iannucci and Bedsole:

Pursuant to Condition #17 of your U.S. Army Corps of Engineers (Corps) authorization related to the Mason Inlet Relocation Project dated December 14, 2001, the Corps has requested that New Hanover County, as the permittee, dredge the Atlantic Intracoastal Waterway (AIWW) via letter from this office dated July 8, 2016. On August 2, 2016, you submitted a proposal for conducting the required work to the North Carolina Division of Coastal Management, which was forwarded to this office. The proposed project includes the removal of approximately 75,000 cubic yards of material from Section 3, Tangent 12 of the AIWW and the adjacent widener via a hydraulic pipeline dredge and placement of this material in an upland disposal facility (confined disposal facility 241) adjacent to Mason Creek. The proposed dredging will take place within the November 16, 2016 to March 30, 2017 work window. The project coordinates are 34.2490 N, -77.7819 W.

On January 1, 2011, we renewed general permit No. 199602878, (copy enclosed), that authorizes maintenance dredging with Federally authorized navigation channels and the discharge of excavated and/or fill material within Federally approved confined upland disposal areas or, in the case of beach quality sand, Federally authorized beach retention areas or Federally authorized beach renourishment project areas in the State of North Carolina pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899.

Your work is authorized provided it is accomplished in strict accordance with your submitted plans, the enclosed general conditions, and the following special conditions:

1. All work authorized by this permit must be performed in strict compliance with the submitted plans and the revised plans received on August 2, 2016, which are a part of this permit.
2. This authorization is valid until December 31, 2016. Activities which have commenced or are under contract to commence related to this authorization will remain authorized provided the activity is completed within twelve months of the date of this permit's expiration.

Please read the enclosed permit to prevent an unintentional violation of Federal law. As this Department of the Army regional general permit does not relieve you of the responsibility to obtain any other required approvals, you should contact appropriate State and local agencies before beginning work.

If you have questions, please contact Kyle Dahl, of the Wilmington Regulatory Field Office, telephone: (910) 251-4469.

Sincerely,



Kyle Dahl
Regulatory Project Manager
Wilmington Regulatory Field Office

Enclosure:
GP 2878 conditions

Copies Furnished (without enclosures):

CESAW-RG/Wicker
CESAW-OP-N/Horton

Ms. Heather Coats
Division of Coastal Management
North Carolina Department of
Environmental Quality
127 Cardinal Drive Extension
Wilmington, North Carolina 28405

Mr. Doug Huggett
Division of Coastal Management
North Carolina Department of
Environmental Quality
400 Commerce Avenue
Morehead City, North Carolina 28557-3421

Ms. Karen Higgins
Division of Water Resources
North Carolina Department of
Environmental Quality
1650 Mail Service Center
Raleigh, North Carolina 27699-1650

Mr. Chad Coburn
Division of Water Resources
North Carolina Department of
Environmental Quality
127 Cardinal Drive Extension
Wilmington, North Carolina 28405

DEPARTMENT OF THE ARMY
Wilmington District, Corps of Engineers
69 Darlington Avenue
Wilmington, North Carolina 28403-1343
<http://www.saw.usace.army.mil/WETLANDS/index.html>

General Permit No. 199602878
Name of Permittee: General Public
Effective Date: January 1, 2011
Expiration Date: December 31, 2016

**DEPARTMENT OF THE ARMY
GENERAL (REGIONAL) PERMIT**

A general permit to perform work in or affecting navigable waters of the United States and waters of the United States, upon recommendation of the Chief of Engineers, pursuant to Section 10 of the Rivers and Harbors Act of March 3, 1899 (33 U.S.C. 1344) and Section 404 of the Clean Water Act (33 U.S.C. 1344) is hereby issued under the authority of the Secretary of the Army by the

District Commander
U.S. Army Engineer District, Wilmington
Corps of Engineers
69 Darlington Avenue
Wilmington, North Carolina 28403-1343

**TO AUTHORIZE MAINTENANCE DREDGING WITHIN FEDERALLY
AUTHORIZED NAVIGATION CHANNELS AND THE DISCHARGE OF EXCAVATED
AND/OR FILL MATERIAL WITHIN FEDERALLY APPROVED CONFINED UPLAND
DISPOSAL AREAS OR, IN THE CASE OF BEACH QUALITY SAND, FEDERALLY
AUTHORIZED BEACH RETENTION AREAS OR FEDERALLY AUTHORIZED
BEACH RENOURISHMENT PROJECT AREAS IN THE STATE OF NORTH
CAROLINA.**

Special Conditions

a. Written confirmation that the proposed work complies with this general permit must be received from the Wilmington District Engineer prior to the commencement of any work. To enable this determination to be made, the permittee must furnish the following information for review and approval to the Wilmington District, Corps of Engineers:

(1) The name, address, and telephone number of the sponsor and/or other individuals responsible for the work.

- (2) A map showing the location(s) of the work.
- (3) Appropriate, written permission of owner(s), leaseholder(s) or others having any rights regarding properties affected by the proposal.
- (4) Plans of the work at an acceptable scale (on 8-1/2 inch by 11-inch paper) showing the location and dimensions of the Federal channel before and after the work, location and size of any borrow area and the location and size of the retention area.
- (5) Quantity (cubic yards) and composition (percentage of fines and/or sand grain size) of excavated and/or fill material.
- (6) A description of the methods, procedures, and equipment to be used to perform the proposed work.
- (7) Approximate commencement and completion dates of the proposed work.

(NOTE: Confirmation that the work is authorized will be provided to the permittee after the Wilmington District's Regulatory and other appropriate District elements have coordinated and agreed with the validity of the proposal. To minimize adverse impacts on fish, wildlife and natural environmental resources, the Wilmington District Engineer, in close coordination with appropriate State and Federal agencies, will insure that all work is conducted in strict accordance with the special and general conditions of this permit and any appropriate recommendations from State/Federal resource agencies. Failure to comply with any condition or specific recommendation will result in an immediate order to cease operations.)

b. No work may occur during times (seasonal restrictions) designated by the North Carolina Division of Coastal Management, the North Carolina Division of Marine Fisheries, the U.S. Fish and Wildlife Service, and/or the National Marine Fisheries Service for protection of fish, shellfish, or wildlife resources. The permittee must not commence work until written confirmation is received from the District Engineer as to when the work may begin and must be completed.

c. Excavation and/or filling of jurisdictional wetlands or submerged aquatic vegetation (SAV) beds is not authorized by this general permit. Excavation activities occurring near jurisdictional wetlands must allow for an adequate buffer, not less than 10 feet, between the excavated area and the wetland to prevent erosion of the wetland.

d. Dredged and/or fill material may not be placed within beach nourishment areas unless the Corps has determined, in writing, that the material complies with the State of North Carolina's Technical Standards for Beach fill Projects, North Carolina Statute T15A NCAC 07H.0312..

- e. Unless specifically approved for beach nourishment or beach disposal, all excavated material must be placed and retained in a Corps approved upland disposal area.
- f. Prior to commencing work the permittee must present the District Engineer with a written preliminary determination providing reasonable assurance that the proposed discharge is not a carrier of contaminants. This documentation must be a comprehensive analysis of all existing and readily available information on the proposed discharge. Work may not proceed until the permittee has received written approval from the District Engineer.
- g. Maintenance excavation must not exceed the Federally authorized dimensions of the Federal channel.
- h. No excavation is authorized in primary nursery or prime shellfish areas as designated by the North Carolina Division of Marine Fisheries.
- i. All fill material used for dike construction or repair will be obtained from an upland source.
- j. Should the activity involve the removal of material from a Corps of Engineers retention area, the permittee shall not damage or destroy dikes or spillways. The permittee will be responsible for any necessary repairs.
- k. Should all or part of a proposed development activity be located in an Area of Environmental Concern (AEC) as designated by the North Carolina Coastal Resources Commission, a Coastal Area Management Act (CAMA) permit is required from the North Carolina Division of Coastal Management before the onset of the proposed activity. Should a Federal activity within any one of North Carolina's twenty coastal counties or which could affect a coastal use or resource in any one of North Carolina's twenty coastal counties be proposed by a Federal agency, a consistency determination pursuant to Subpart "C" of 15 CFR 930 must be prepared and submitted by that Federal agency to the North Carolina Division of Coastal Management before the onset of the proposed activity.
- l. Return water from upland, contained disposal areas must comply with Water Quality Certification No. 3687, issued by the North Carolina Division of Water Quality (NCDWQ) on December 31, 2004. Water Quality Certification for the discharge of beach quality sand in waters of the United States will be obtained prior to any commencement of such work.

General Conditions

- a. Except as authorized by this general permit or any USACE approved modification to this general permit, no excavation, fill or mechanized land-clearing activities shall take place within waters or wetlands, at any time in the construction or maintenance of this project. This permit does not authorize temporary placement or double handling of excavated or fill material

within waters or wetlands outside the permitted area. This prohibition applies to all borrow and fill activities connected with this project.

b. Authorization under this general permit does not obviate the need to obtain other federal, state, or local authorizations.

c. All work authorized by this general permit must comply with the terms and conditions of the applicable Clean Water Act Section 401 Water Quality Certification for this general permit issued by the North Carolina Division of Water Quality.

d. The permittee shall employ all sedimentation and erosion control measures necessary to prevent an increase in sedimentation or turbidity within waters and wetlands outside the permit area. This shall include, but is not limited to, the immediate installation of silt fencing or similar appropriate devices around all areas subject to soil disturbance or the movement of earthen fill, and the immediate stabilization of all disturbed areas. Additionally, the project must remain in full compliance with all aspects of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statutes Chapter 113A Article 4).

e. The activities authorized by this general permit must not interfere with the public's right to free navigation on all navigable waters of the United States. No attempt will be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the authorized work for a reason other than safety.

f. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

g. The permittee, upon receipt of a notice of revocation of this permit or upon its expiration before completion of the work will, without expense to the United States and in such time and manner as the Secretary of the Army or his authorized representative may direct.

h. The permittee will allow the Wilmington District Engineer or his representative to inspect the authorized activity at any time deemed necessary to assure that the activity is being performed or maintained in strict accordance with the Special and General Conditions of this permit.

i. This general permit does not grant any property rights or exclusive privileges.

j. This permit does not authorize any injury to the property or rights of others.

k. This general permit does not authorize the interference with any existing or proposed federal project.

l. In issuing this permit, the Federal Government does not assume any liability for the following:

(1) Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

(2) Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

(3) Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

(4) Design or construction deficiencies associated with the permitted work

(5) Damage claims associated with any future modification, suspension, or revocation of this permit.

m. Authorization provided by this general permit may be modified, suspended or revoked in whole or in part if the Wilmington District Engineer, acting for the Secretary of the Army, determines that such action would be in the best public interest. The term of this general permit shall be five (5) years unless subject to modification, suspension or revocation. Any modification, suspension or revocation of this authorization will not be the basis for any claim for damages against the United States Government.

n. This general permit does not authorize any activity that the District Engineer determines, after any necessary investigations, would adversely affect:

(1) Rivers named in Section 3 of the Wild and Scenic Rivers Act (15 U.S.C. 1273), those proposed for inclusion as provided by Sections 4 and 5 of the Act and wild, scenic and recreational rivers established by state and local entities.

(2) Historic, cultural or archeological sites listed in or eligible for inclusion in the National Register of Historic Places as defined in the National Historic Preservation Act of 1966 and its codified regulations, the National Historic Preservation Amendment Acts of 1980 and 1992, the Abandoned Shipwreck Act of 1987 and the Native American Graves Protection and Repatriation Act.

(3) Sites included in or determined eligible for listing in the National Registry of Natural Landmarks.

o. This general permit does not authorize any activity that will adversely affect any threatened or endangered species or a species proposed for such designation, or their designated critical habitat as identified under the Federal Endangered Species Act (16 U.S.C. 1531). Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the Corps field offices or at the following internet address: <http://www.ncnhp.org/Pages/heritagedata.html>. or <http://nc-es.fws.gov/es/es.html>. Permittees should notify the Corps if any listed species or designated critical habitat might be affected by the proposed project and may not begin work until notified by the Corps that the requirements of the Endangered Species Act have been satisfied and that the activity is authorized.

p. Permittees are advised that development activities in or near a floodway may be subject to the National Flood Insurance Program that prohibits any development, including fill, within a floodway that results in any increase in base flood elevations. This general permit does not authorize any activity prohibited by the National Flood Insurance Program.

q. The permittee must install and maintain, at his expense, any signal lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, on authorized facilities. For further information, the permittee should contact the U.S. Coast Guard Marine Safety Office at (910) 772-2191.

r. The permittee must maintain any structure or work authorized by this permit in good condition and in conformance with the terms and conditions of this permit. The Permittee is not relieved of this requirement if the Permittee abandons the structure or work. Transfer in fee simple of the work authorized by this permit will automatically transfer this permit to the property's new owner, with all of the rights and responsibilities enumerated herein. The permittee must inform any subsequent owner of all activities undertaken under the authority of this permit and provide the subsequent owner with a copy of the terms and conditions of this permit.

s. At his sole discretion, any time during the processing cycle, the Wilmington District Engineer may determine that this general permit will not be applicable to a specific proposal. In such case, the procedures for processing an individual permit in accordance with 33 CFR 325 will be available.

t. Except as authorized by this general permit or any USACE approved modification to this general permit, all fill material placed in waters or wetlands shall be generated from an upland source and will be clean and free of any pollutants except in trace quantities. Metal products, organic materials (including debris from land clearing activities), or unsightly debris will not be used.

u. Except as authorized by this general permit or any USACE approved modification to this general permit, all excavated material will be disposed of in approved upland disposal areas.

v. Activities which have commenced (i.e., are under construction) or are under contract to commence in reliance upon this general permit will remain authorized provided the activity is completed within twelve months of the date of the general permit's expiration, modification, or revocation. Activities completed under the authorization of this general permit which were in effect at the time the activity was completed continue to be authorized by the general permit.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:



Jefferson M. Ryscavage
Colonel, U.S. Army
District Commander



NEW HANOVER COUNTY

Engineering Department
230 Government Center Drive · Suite 160
Wilmington, North Carolina 28403
TELEPHONE (910)-798-7139
FAX (910) 798-7051

James P. Iannucci, PE, CFM
County Engineer
H. Layton Bedsole Jr., REM
Shore Protection Coordinator

August 2, 2016

Heather Coats, Assistant Major Permits Coordinator
North Carolina Division of Coastal Management
127 Cardinal Drive Extension
Wilmington, NC 28405

Via Email Transmittal: heather.coats@ncdenr.gov

Re: Atlantic Intracoastal Waterway (AIWW) and Mason Creek Crossing
Maintenance Dredging
Minor Modification Request, Permit Number 151-01
Expiration Date, 31 December 2020
Mason Inlet Relocation Project (MIRP)

Dear Ms. Coats,

New Hanover County (NHC) is requesting a North Carolina Division of Coastal Management (NCDCM) minor modification allowing maintenance dredging within reaches of the US Army Corps of Engineers (USACE) AIWW. Please reference the attached USACE notification package dated 8 July 2016. As noted in the USACE's package, this notification of AIWW maintenance dredging is in accordance with Action ID. 1999-01052, Condition 17 of the MIRP's federal authorization.

Attached are July 2016 bathymetric surveys, shoaled volume calculations and AIWW cross sections within the USACE's reaches of concern. Based on these surveys, an estimated quantity of 75,000 cubic yards would be removed and managed within the adjacent confined disposal facility (CDF) 241. Also attached are an aerial of CDF 241 and an excerpted figure from a previous AIWW maintenance event illustrating CDF 241 and template elements.

NHC anticipates a small hydraulic pipeline dredge plant with material placement within the adjacent CDF 241. The recently rehabilitated (2014) discharge weir located on the CDF's western wall will ensure a compliant effluent returning to the AIWW. The NHC planning template matches the USACE's AIWW template in bottom width (90 feet), depth [12 feet (+2 feet) mean low water] and side slopes of (1:3). NHC's intention is to complete this maintenance dredging in the upcoming 2016/2017 environmental window. This requested action mirrors the AIWW crossing maintenance event executed in early 2014.

A preconstruction meeting will be held prior to initiating the maintenance dredging. NHC appreciates the guidance and support provided by the Division and the consideration of our minor modification request. The NCDCM minor modification fee of \$100.00 will be hand delivered to the Wilmington Regional Office. If questions arise or additional information is needed, please feel free to contact me at (910) 798-7104 or at lbedsole@nhcgov.com.

H. Layton Bedsole Jr., R.E.M.



NHC Shore Protection Coordinator

Cc via email:

D. Huggett, NCDCM; doug.huggett@ncdenr.gov

D. Wilson, NCDCM; debra.wilson@ncdenr.gov

R. Mairs, NCDCM; robb.mairs@ncdenr.gov

B. Keistler, USACE; Robert.W.Keistler@usace.army.mil

R. Bullock, USACE; Roger.D.Bullock@usace.army.mil

J. Manning, USACE; John.E.Manning@usace.army.mil

D. Beter, USACE; Dale.E.Beter@usace.army.mil

K. Dahl, USACE; kyle.j.dahl@usace.army.mil

J. Iannucci, NHC County Engineer; JIannucci@nhcgov.com



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403-1343

July 8, 2016

Wilmington Regulatory Field Office
SAW-1999-01052

Re: Maintenance Dredging at Masons Inlet Crossing: Mason's Inlet Relocation Project (MIRP)

Mr. Jim Iannucci, Director
New Hanover County Engineering Department
230 Government Center Drive, Suite 160
Wilmington, North Carolina 28403

Mr. Layton Bedsole, Shore Protection Coordinator
New Hanover County Engineering Department
230 Government Center Drive, Suite 195
Wilmington, North Carolina 28403



Dear Mr. Iannucci and Mr. Bedsole:

Please reference the terms and conditions of the Department of the Army (DA) Permit issued on 14 December, 2001 for the Mason Inlet Relocation Project (MIRP). The purpose of this letter is to make you aware of accumulated sediments within the Federal Channel at the mouth of Masons Inlet where it intersects with the Atlantic Intracoastal Waterway (AIWW). U.S. Army Corps of Engineers Navigation Department's recent hydrographic surveys have revealed increased shoaling in this area (see attached), which may result in a possible hazard to navigation. As the permittee, New Hanover County is responsible for maintaining this area in accordance with MIRP permit condition No. 17:

"If the District Engineer, in his sole discretion, determines that shoaling has occurred within the AIWW on Tangent 12, Section 3 between monuments T12-8 and T12-41, at any time during the life of the project and that such section should be dredged in order to maintain safe and efficient navigation on the AIWW, he will so notify the permittee in writing."

The Inlet Crossing at Section 3 Tangent 12 is federally authorized to -12 feet with the ability to overdredge by 2 additional feet (to a maximum of -14'). The Corps requests that you complete this requirement within the next November 15 – March 30 work window. Please respond in writing that you acknowledge this requirement and provide a proposed plan of action and project timeline. Details should include an approved disposal location for the dredged material.

Thank you for your attention to this matter. If you have any questions regarding this letter, please feel free to contact Mr. Kyle Dahl, at the above letterhead address, by phone at 910-251-4469, or by email at: kyle.j.dahl@usace.army.mil.

Sincerely,



Dale E. Beter, Chief
Wilmington Regulatory Field Office

Copies Furnished:

CESAW-RG/Wicker

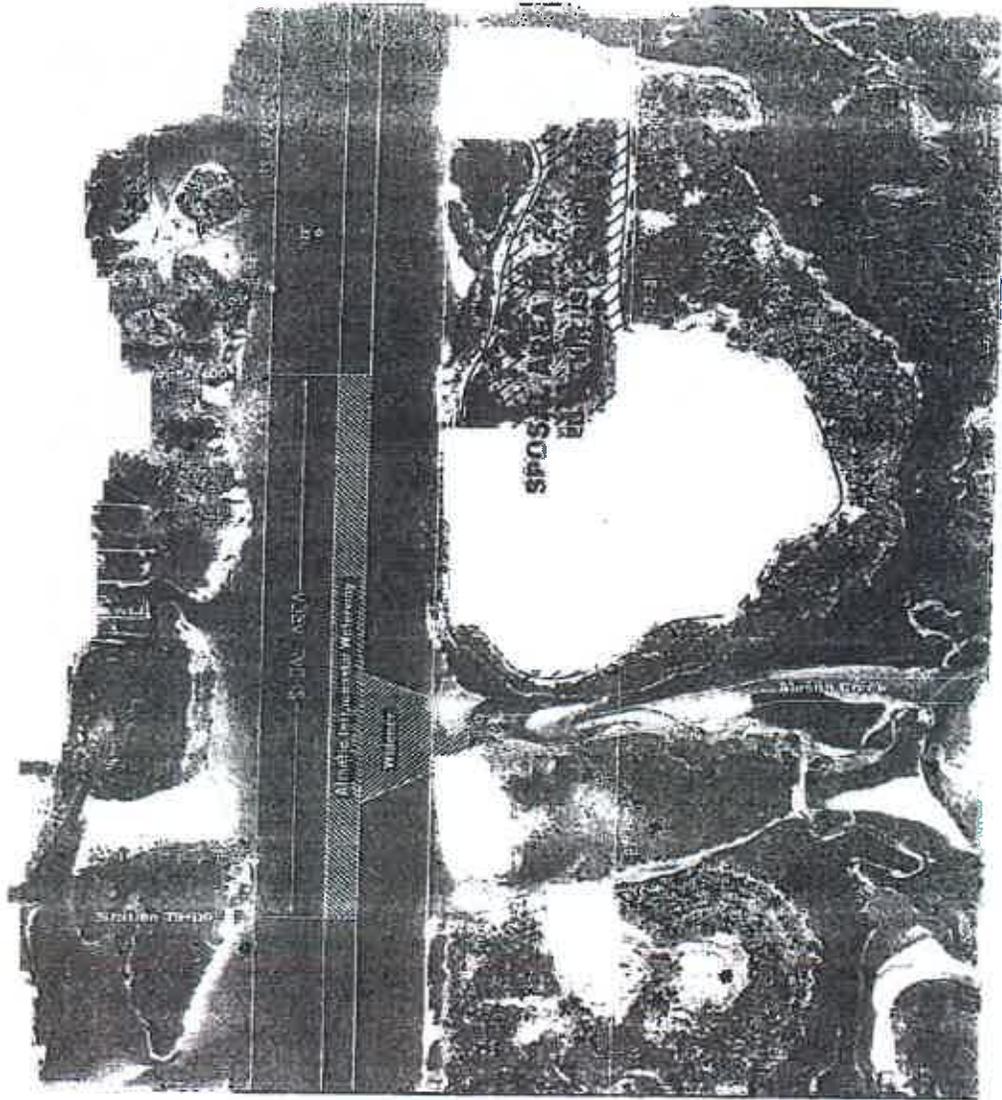
CESAW-RG-L/Beter, Dahl

CESAW-OP-N/Horton



Confined Disposal Facility 24.1.

Source: TI Coastal 2016 Aerial



2002 Widener

AVAILABLE DREDGE VOLUME:
GRADE 12.0' MLW 52,000 CY
2' ALLOWABLE OVERDEPTH 23,000 CY
TOTAL AVAILABLE VOLUME 75,000 CY

SOUNDINGS ARE IN U.S. FEET AND ARE REFERENCED TO MLW

ATLANTIC INTRACOASTAL WATERWAY (AIWW)

AIWW CHANNEL

AIWW CHANNEL

WIDENER

DREDGE AREA LIMITS

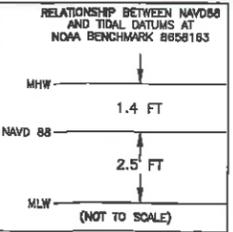
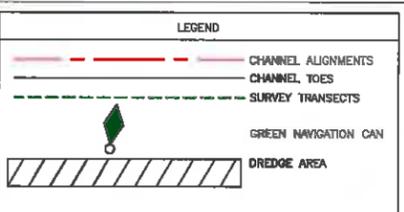
USAOE DISPOSAL AREA DA-241

MASON CREEK

**FOR PERMITTING PURPOSES
 NOT FOR CONSTRUCTION**

REV	REVISIONS	DATE	APP

NOTES:
 1. NAVIGATION AID # 121 LOCATED ON JULY 06 2016.
 2. HORIZONTAL COORDINATES ARE IN U.S. SURVEY FEET AND ARE REFERENCED TO U.S. STATE PLANE NORTH CAROLINA, NAD 83.
 3. HORIZONTAL POSITIONING WAS OBTAINED USING RTK GPS REFERENCED TO SURVEY MONUMENT ROOFTOP SHELL ISLAND.
 X: 2,370,248.41
 Y: 179,185.07
 Z: 494.23 NAVD 88
 4. AERIAL IMAGERY WAS OBTAINED FROM TERRALINA MAPPING CONSULTANTS AND IS DATED MAY 2016.
 5. SCALE IS 1" = 200' WHEN PLOTTED AS 17" X 11".



CHRISTOPHER T. MARELLO
 NC P.L.S. #4983

GBANC
 ENGINEERS * SURVEYORS
 GAHAGAN & BRYANT ASSOCIATES OF NC, PLLC
 295-A NORTH GREEN MEADOWS DRIVE
 WILMINGTON, NC 28405-3933
 TEL: 910.313.3338 FAX: 910.313.6822
 WWW.GBA-INC.COM
 NC REGISTERED ENGINEERING FIRM P-0743

AIWW MAINTENANCE DREDGING PROJECT
 TANGENT 12, SECTION 3
 MASON CREEK CROSSING
 NEW HANOVER COUNTY, NC
 DREDGE AREA BOUNDARIES

DWG DATE:	22 JULY 2016	DWG:	MIRP1807DB-AIWW-Clearance.dwg
DRAWN:	J. WOOLURE	CHECKED:	C. MARELLO
SCALE:	1" = 200'	ENGR:	C. BRYANT
	SHEET:	1 OF 8	REV: 0

**FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION**

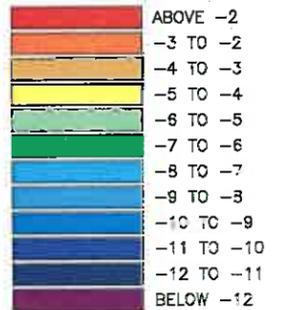
SOUNDINGS ARE IN U.S. FEET AND ARE REFERENCED TO MLW

ATLANTIC INTRACOASTAL WATERWAY (AIWW)

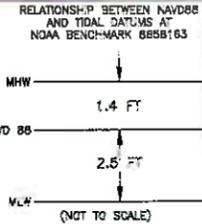
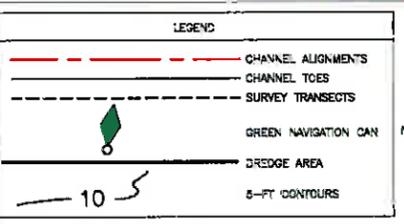
USACOE DISPOSAL AREA
DA-241

MASON CREEK

ELEVATION LEGEND (FT MLW)



NOTES:
 1. THE INFORMATION DEPICTED HERE REPRESENTS THE RESULTS OF CONDITIONAL SURVEYS MADE ON JULY 28 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITION EXISTING AT THAT TIME.
 2. NAVIGATION AID # 121 LOCATED ON JULY 08 2016.
 3. HORIZONTAL COORDINATES ARE IN U.S. SURVEY FEET AND ARE REFERENCED TO U.S. STATE PLANE NORTH-CAROLINA, NAD 83.
 4. HORIZONTAL POSITIONING WAS OBTAINED USING RTK GPS REFERENCED TO SURVEY MONUMENT ROCKTOP SHELL ISLAND.
 X: 2,370,248.41
 Y: 179,185.37
 Z: +94.23 NAVD 88
 5. SOUNDINGS ARE IN U.S. FEET AND ARE REFERENCED TO MLW.
 6. SOUNDINGS ARE BELOW THE REFERENCE PLANE UNLESS PRECEDED BY A PLUS (+) SIGN.
 7. SOUNDINGS SHOWN ARE PART OF A LARGER DATASET, WHICH HAS BEEN REDUCED FOR CLARITY ON THIS MAP.
 8. AERIAL IMAGERY WAS OBTAINED FROM TERRALINA MAPPING CONSULTANTS AND IS DATED MAY 2016.
 9. SCALE IS 1" = 200' WHEN PLOTTED AS 17" X 11".

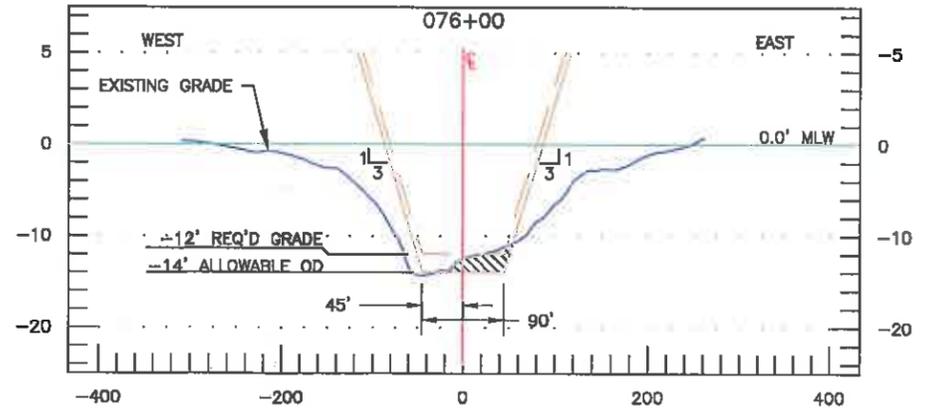
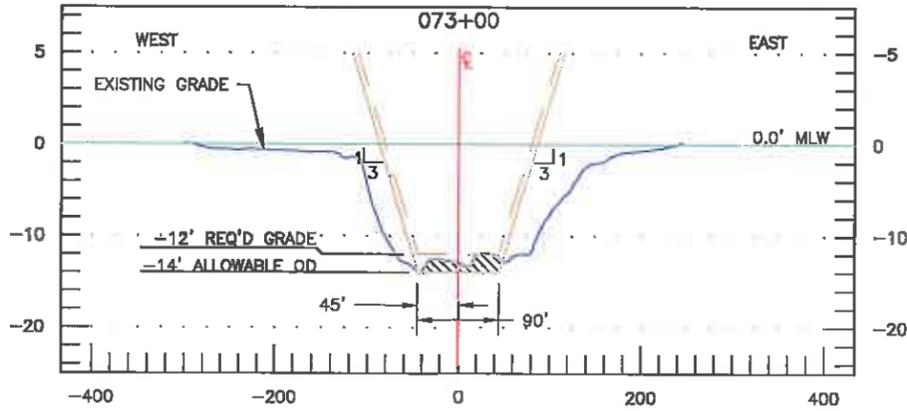
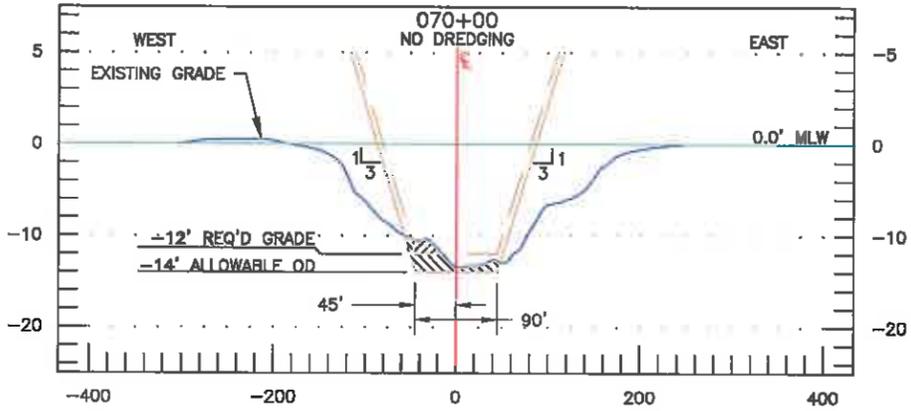
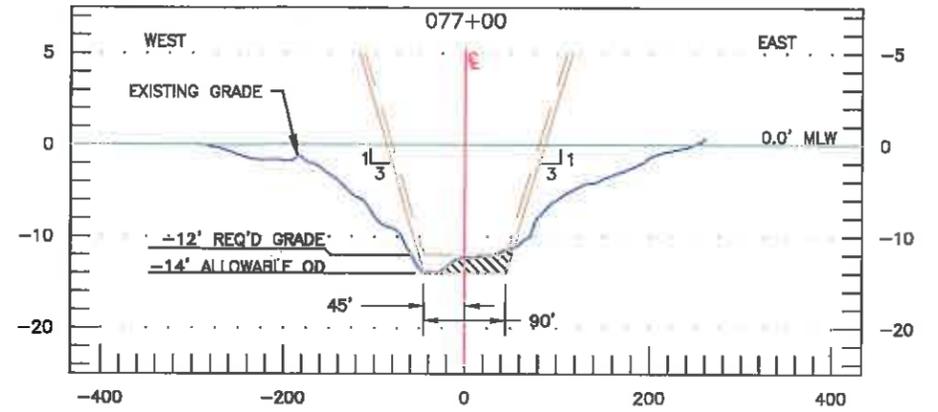
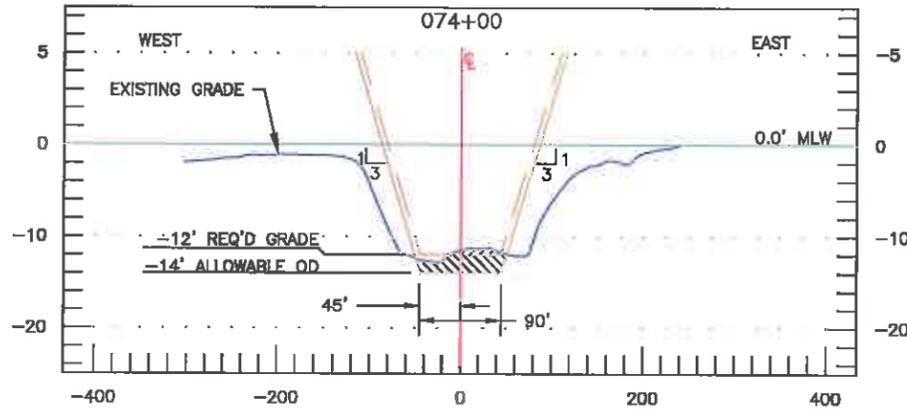
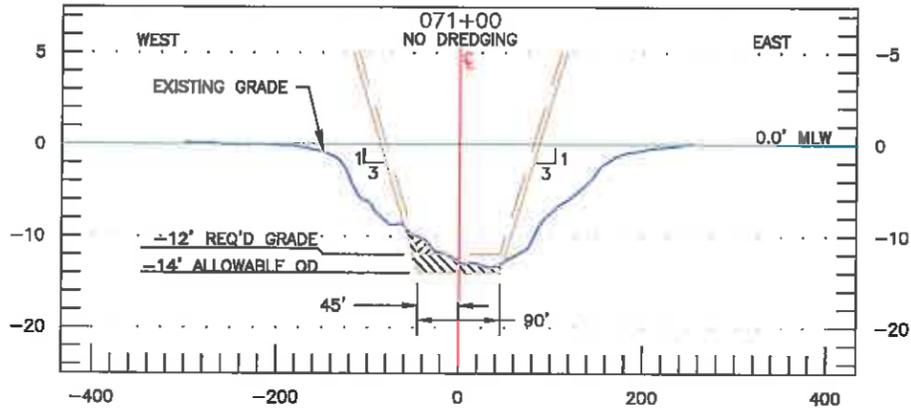
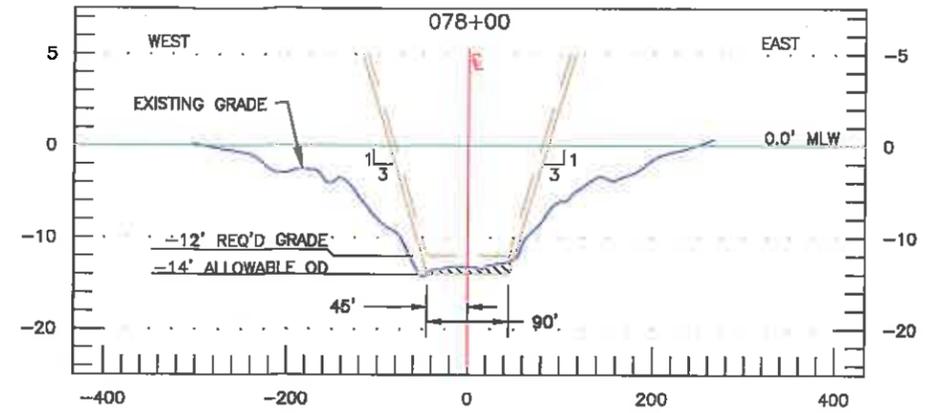
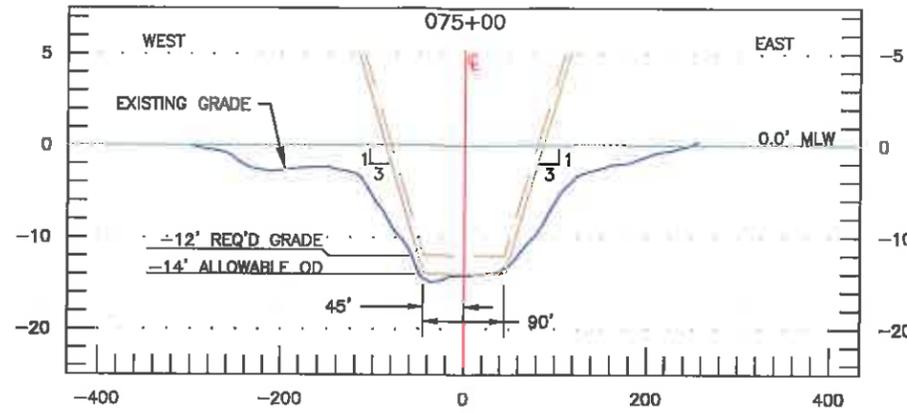
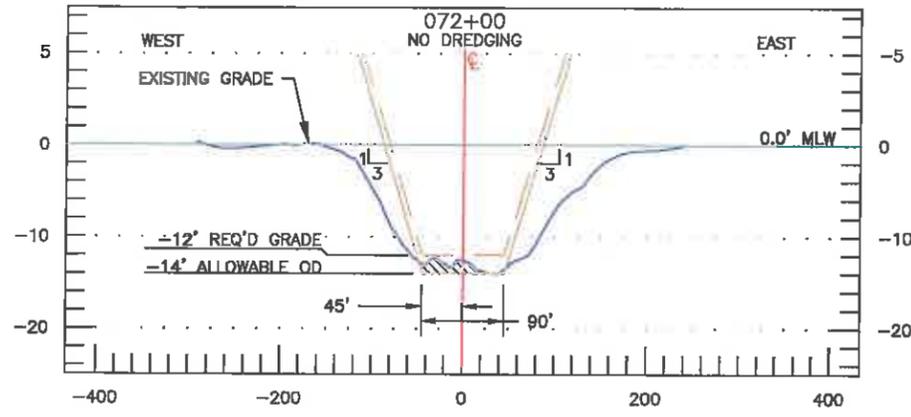


CHRISTOPHER T. MARELLO
 NC P.L.S. #4983

GBANC
 ENGINEERS * SURVEYORS
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 295-A NORTH GREEN MEADOWS DRIVE
 WILMINGTON, NC 28405-3933
 TEL: 910.313.3338 FAX: 910.313.6822
 WWW.GBA-NC.COM
 NC REGISTERED ENGINEERING FIRM P-0743

AIWW MAINTENANCE DREDGING PROJECT
 TANGENT 12, SECTION 3
 MASON CREEK CROSSING
 NEW HANOVER COUNTY, NC
 AIWW/WIDENER CONDITION SURVEY

DWG DATE:	15 JULY 2016	DWG:	WRP180708-AIWW-Clacrance.dwg
DRAWN:	J. MCCLURE	CHECKED:	C. MARELLO
SCALE:	1" = 200'	ENGR:	C. BRYANT
SHEET:	2 OF 8	REV:	0



LEGEND	
	REQUIRED GRADE DREDGE TEMPLATE
	ALLOWABLE OVERDEPTH DREDGE TEMPLATE
	REQUIRED GRADE
	ALLOWABLE OVERDEPTH

**FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION**

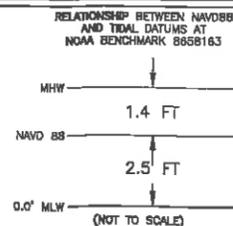


VERTICAL GRAPHIC SCALE

HORIZONTAL GRAPHIC SCALE

REV	REVISIONS	DATE	APP

NOTES:
 1. THE INFORMATION DEPICTED HERE REPRESENTS THE RESULTS OF CONDITIONAL SURVEYS MADE ON 08 JULY 2016 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITION EXISTING AT THAT TIME.
 2. HORIZONTAL COORDINATES ARE IN U.S. SURVEY FEET AND ARE REFERENCED TO U.S. STATE PLANE NORTH CAROLINA, NAD 83.
 3. HORIZONTAL POSITIONING WAS OBTAINED USING RTK GPS REFERENCED TO SURVEY MONUMENT ROOFTOP SHELL ISLAND.
 X: 2370,248.41
 Y: 179,165.07
 Z: +94.23 NAVD 88
 4. ELEVATIONS ARE IN U.S. FEET AND ARE REFERENCED TO 0.0' MLW.
 5. SCALE IS 1" = 20' VERTICAL AND 1" = 200' HORIZONTAL WHEN PLOTTED AS 17" X 11".



CHRISTOPHER T. MARELLO
 NC P.L.S. #4983

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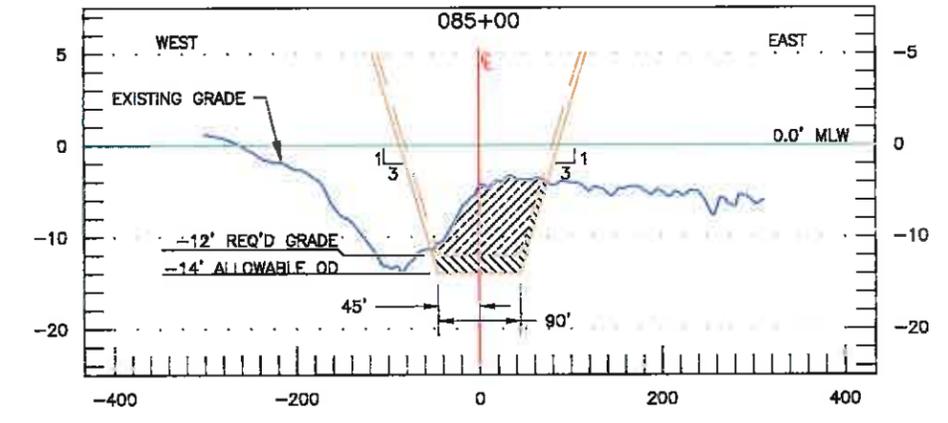
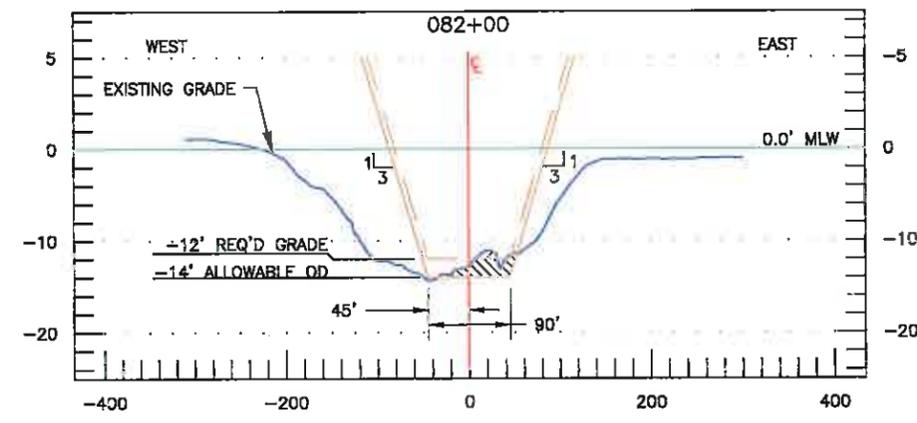
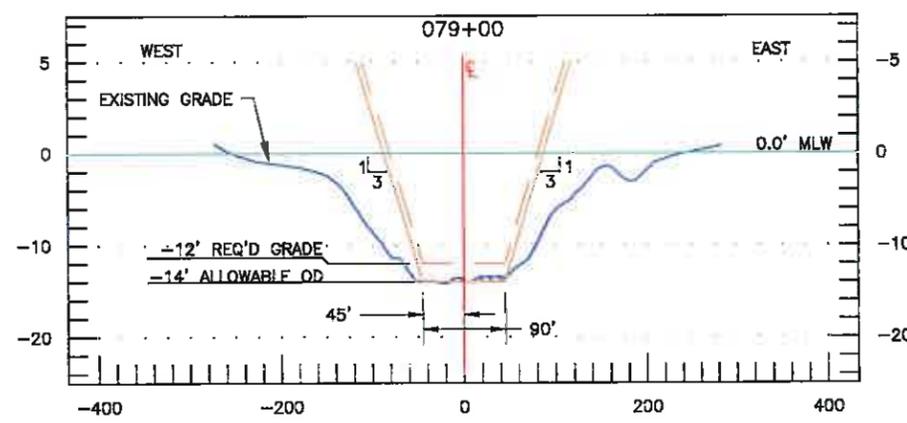
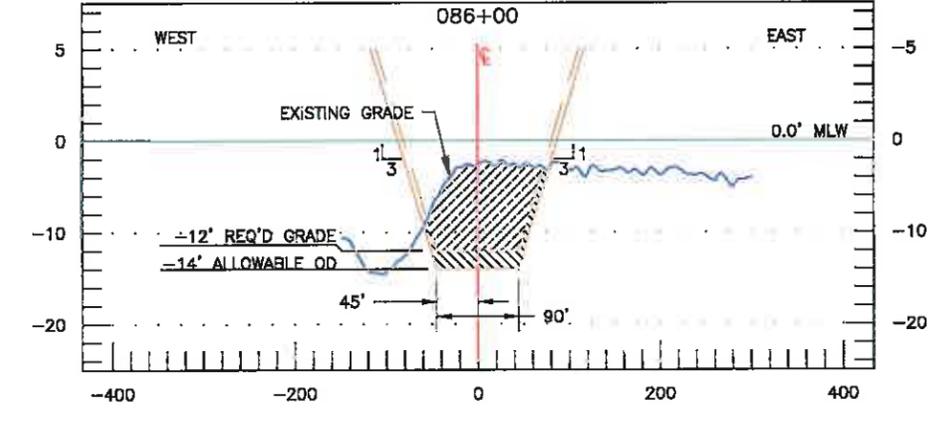
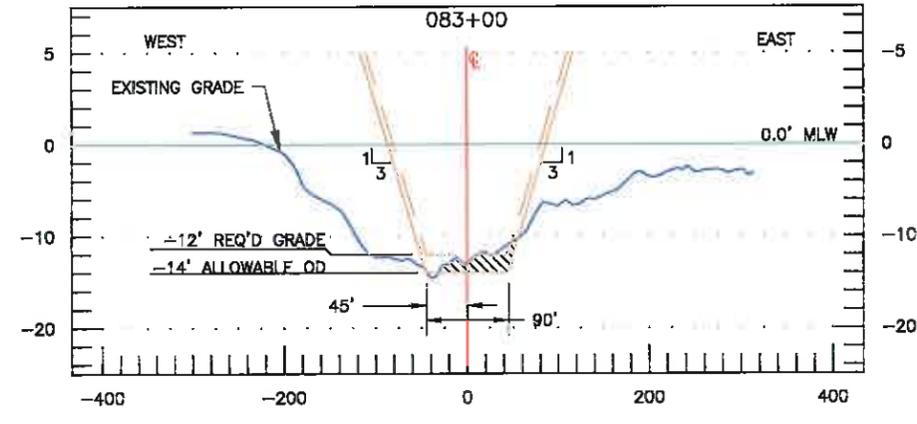
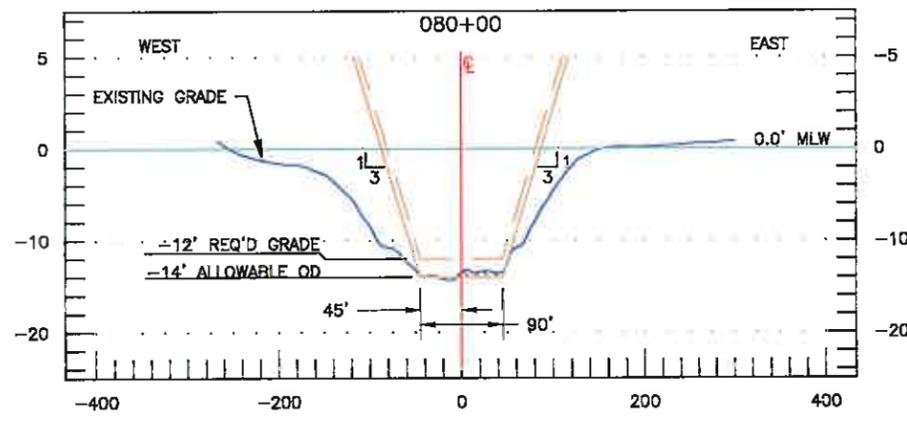
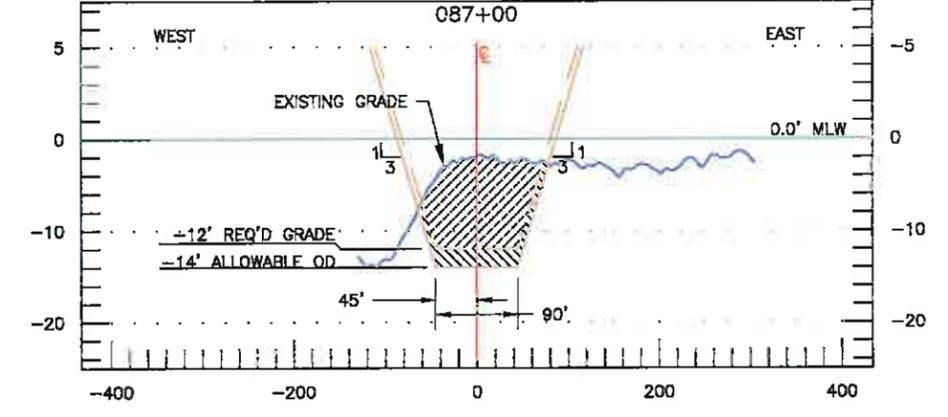
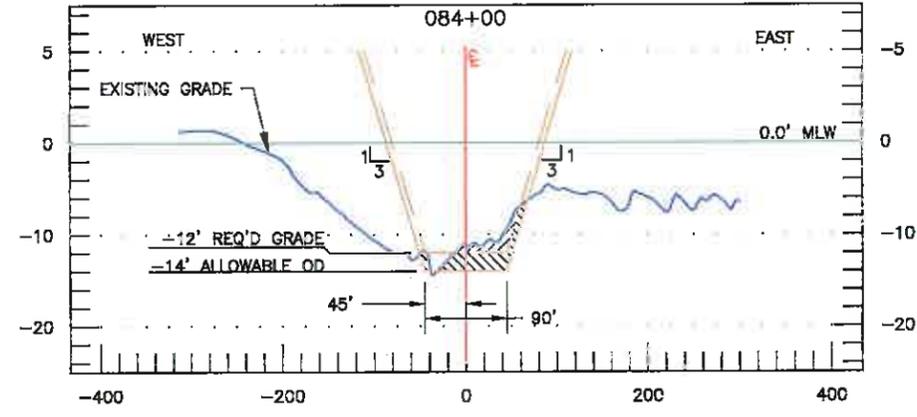
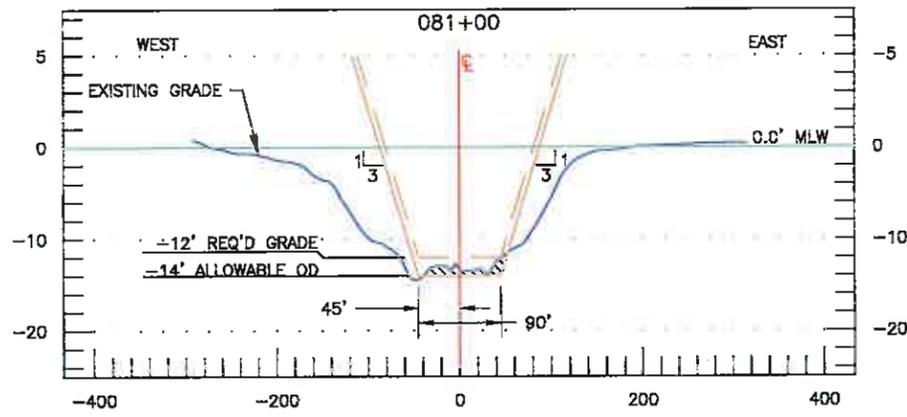
GAHAGAN & BRYANT ASSOCIATES OF NC, PLLC
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 WILMINGTON, NC 28405-3933
 TEL: 910.313.3338 FAX: 910.313.6822
 WWW.GBA-INC.COM

NC REGISTERED ENGINEERING FIRM P-0743

AIWW MAINTENANCE DREDGING PROJECT
 TANGENT 12, SECTION 3
 MASON CREEK CROSSING
 NEW HANOVER COUNTY, NC

AIWW CROSS SECTIONS

DWG DATE: 15 JULY 2016	DWG: MIRP180708-AIWW-Clearance.dwg
DRAWN: J. MCCLURE	CHECKED: C. MARELLO
SCALE: 1" = 200'	ENGR: C. BRYANT
SHEET: 3 OF 8	REV: 0



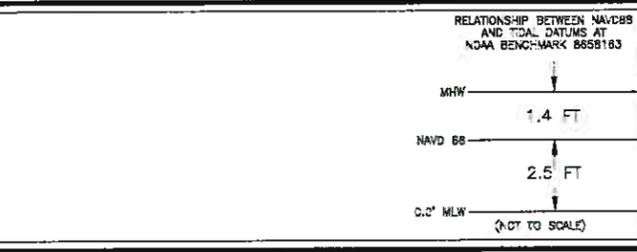
**FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION**

LEGEND	
	REQUIRED GRADE DREDGE TEMPLATE
	ALLOWABLE OVERDEPTH DREDGE TEMPLATE
	REQUIRED GRADE
	ALLOWABLE OVERDEPTH



REV	REVISIONS	DATE	APP

NOTES:
 1. THE INFORMATION DEPICTED HERE REPRESENTS THE RESULTS OF CONDITIONAL SURVEYS MADE ON 08 JULY 2016 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITION EXISTING AT THAT TIME.
 2. HORIZONTAL COORDINATES ARE IN U.S. SURVEY FEET AND ARE REFERENCED TO U.S. STATE PLANE NORTH CAROLINA, NAD 83.
 3. HORIZONTAL POSITIONING WAS OBTAINED USING RTK GPS REFERENCED TO SURVEY MONUMENT ROOFTOP SHELL ISLAND.
 X: 2,372,246.41
 Y: 179,155.07
 Z: +94.23 NAVD 88
 4. ELEVATIONS ARE IN U.S. FEET AND ARE REFERENCED TO O.C. MLW.
 5. SCALE IS 1" = 200' WHEN PLOTTED AS 17" X 11".



CHRISTOPHER T. VARELLO
 NC P.L.S. #4983

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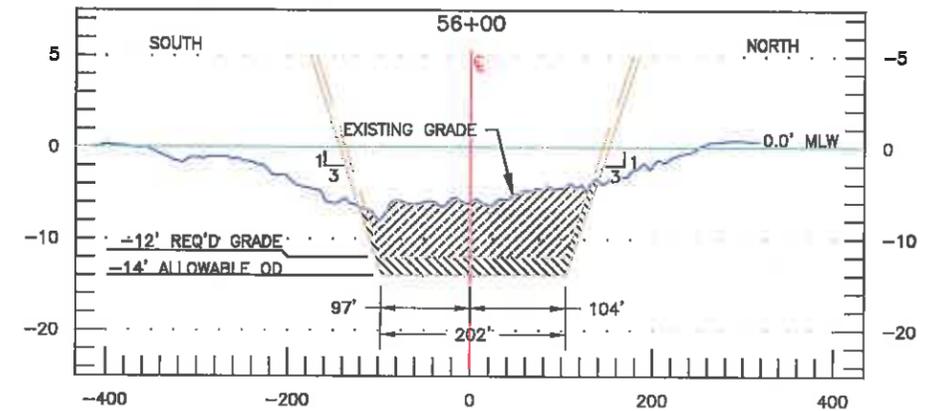
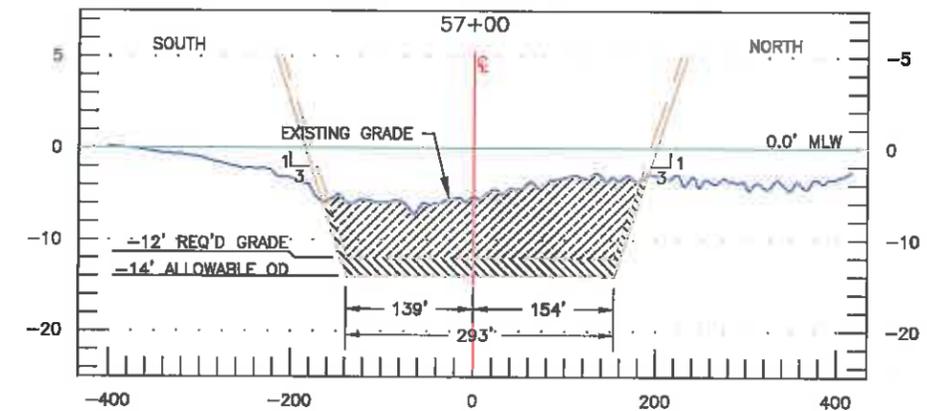
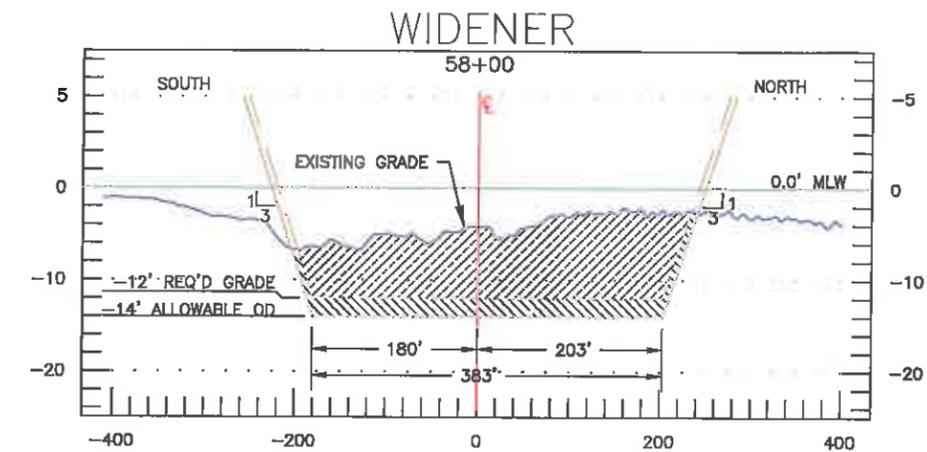
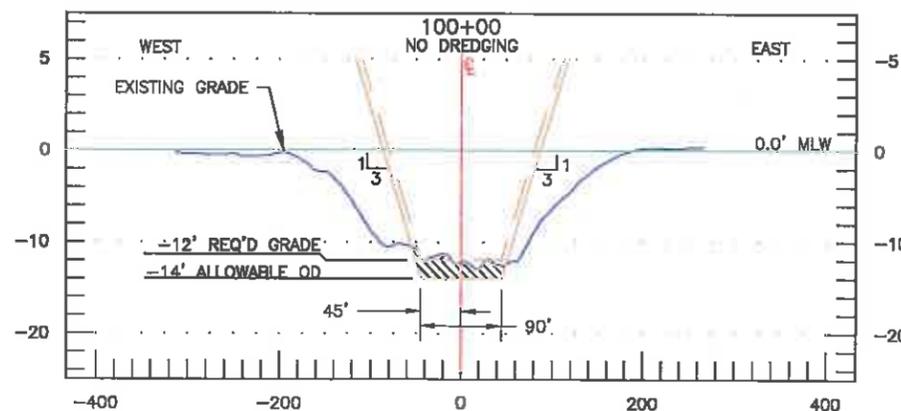
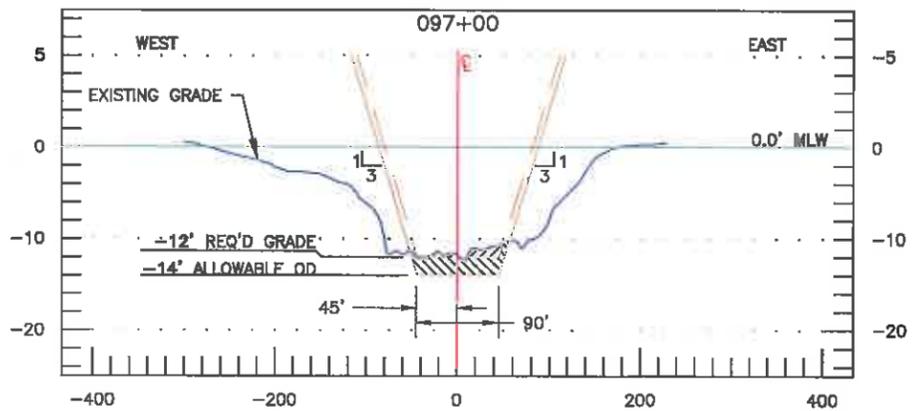
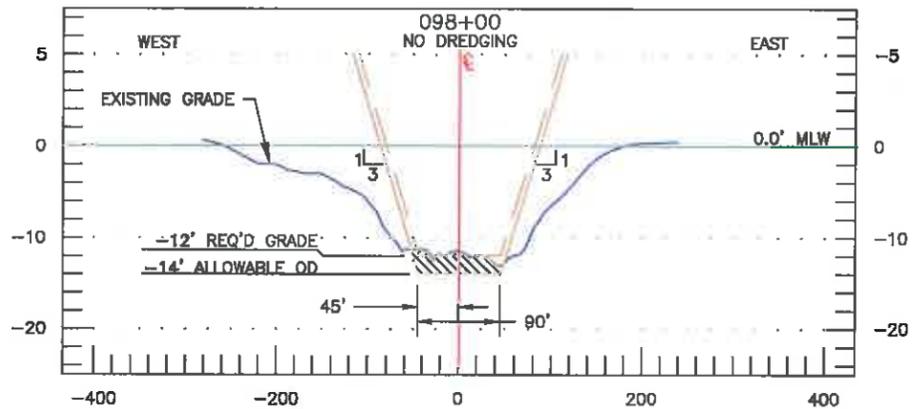
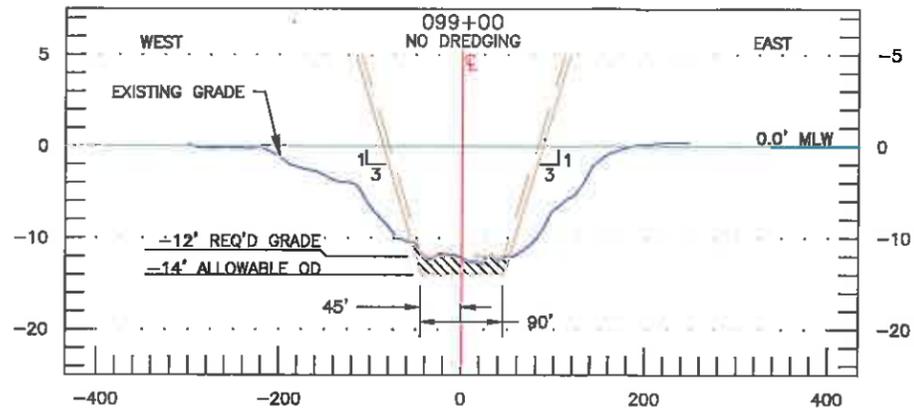
GAHAGAN & BRYANT ASSOCIATES OF NC, PLLC
 295-A NORTH GREEN MEADOWS DRIVE
 WILMINGTON, NC 28405-3933
 TEL: 910.313.3338 FAX: 910.313.6822
 WWW.GBA-INC.COM

NC REGISTERED ENGINEERING FIRM P-0743

AIWW MAINTENANCE DREDGING PROJECT
 TANGENT 12, SECTION 3
 MASON CREEK CROSSING
 NEW HANOVER COUNTY, NC

AIWW CROSS SECTIONS

DWG DATE:	18 JULY 2016	DWG:	MIRP180728-AIWW-CrossSecs.dwg
DRAWN:	J. MCCLURE	CHECKED:	C. VARELLO
SCALE:	1" = 200'	SHEET:	4 OF 6
		ENGR:	C. BRYANT
		REV:	0



LEGEND

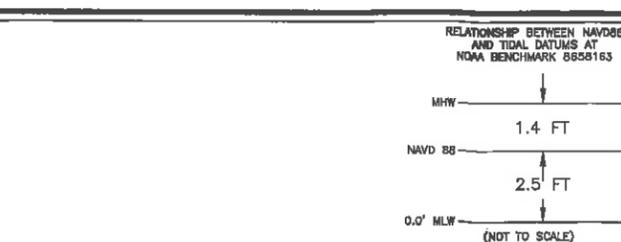
- REQUIRED GRADE DREDGE TEMPLATE
- ALLOWABLE OVERDEPTH DREDGE TEMPLATE
- REQUIRED GRADE
- ALLOWABLE OVERDEPTH

**FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION**



REV	REVISIONS	DATE	APP

NOTES:
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 X: 2,370,246.41
 Y: 179,165.07
 Z: +94.23 NAVD 88
 4. ELEVATIONS ARE IN U.S. FEET AND ARE REFERENCED TO 0.0' MLW.
 5. SCALE IS 1" = 200' WHEN PLOTTED AS 17" X 11".



CHRISTOPHER T. MARELLO
 NC P.L.S. #4993

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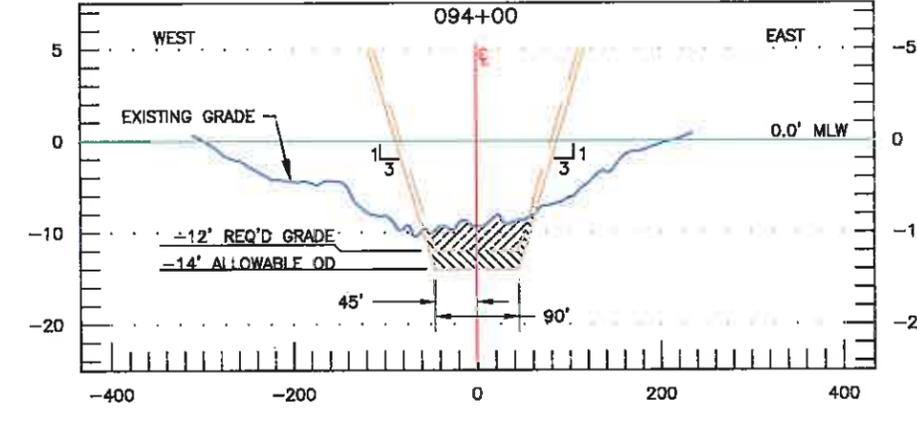
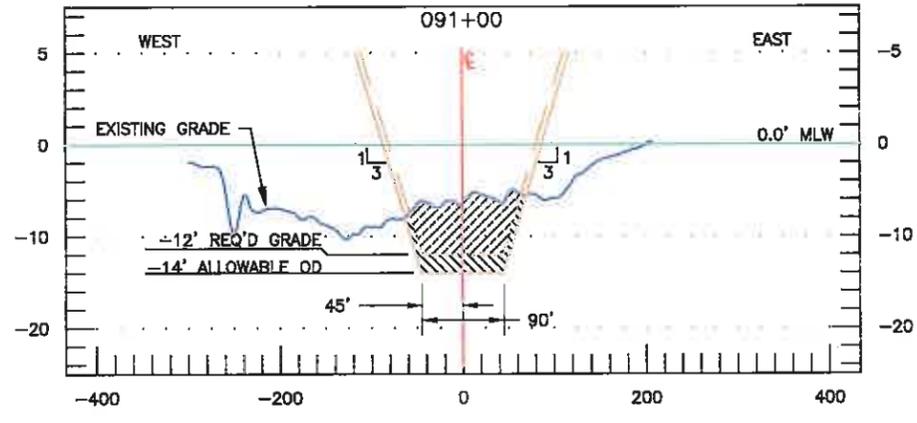
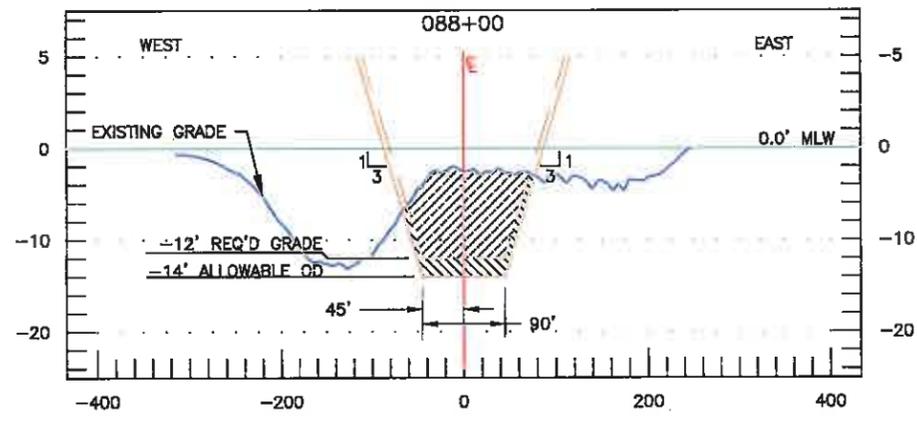
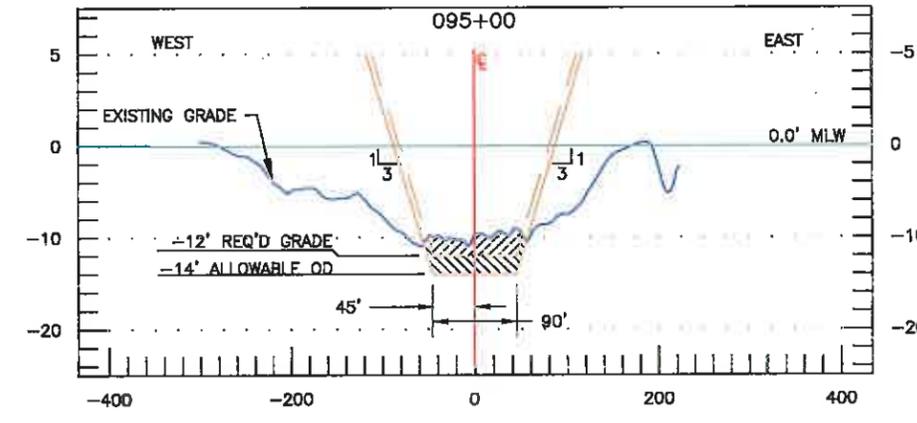
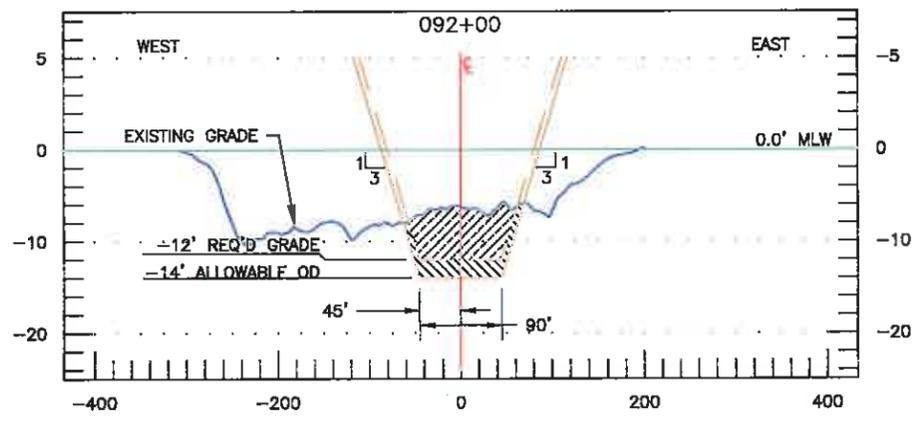
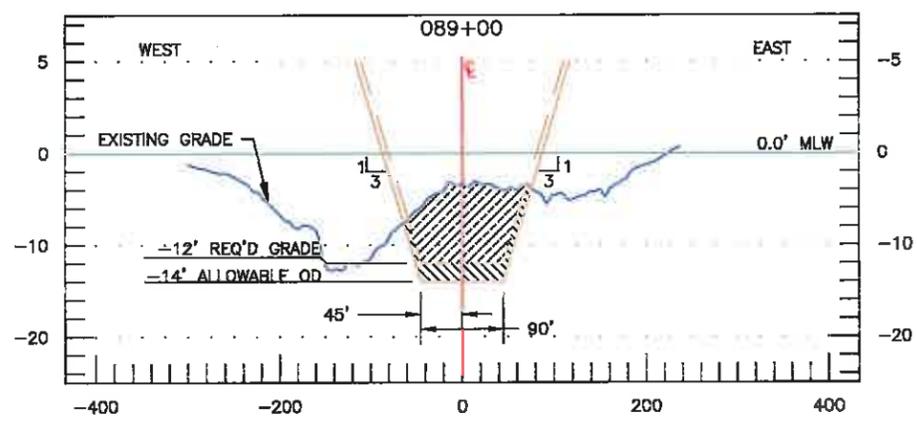
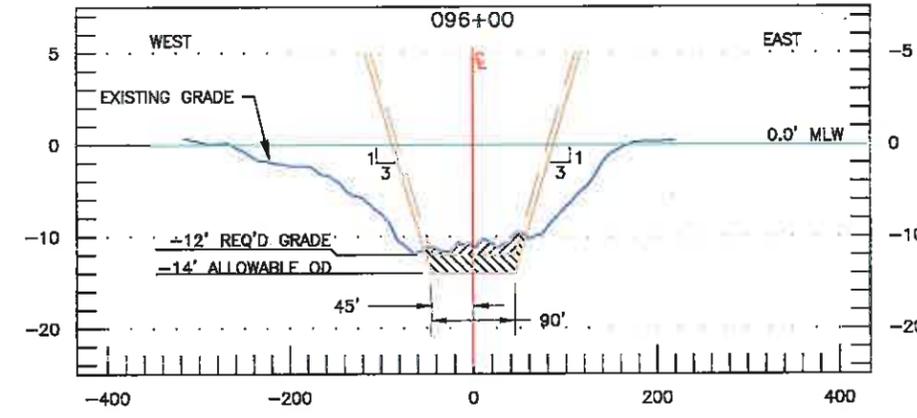
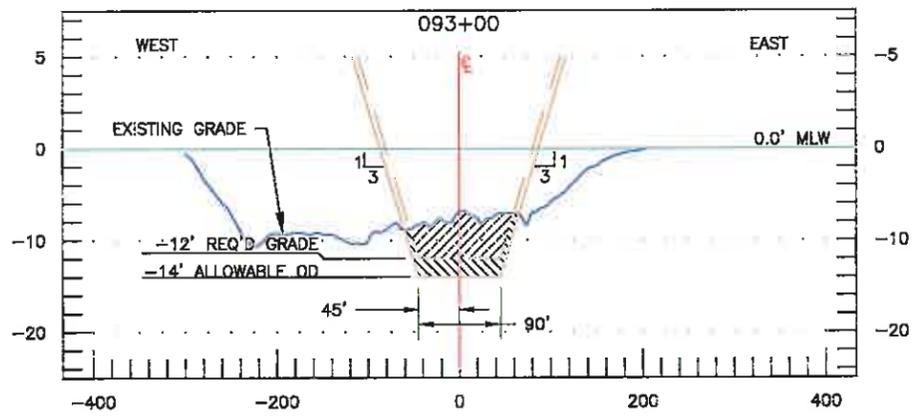
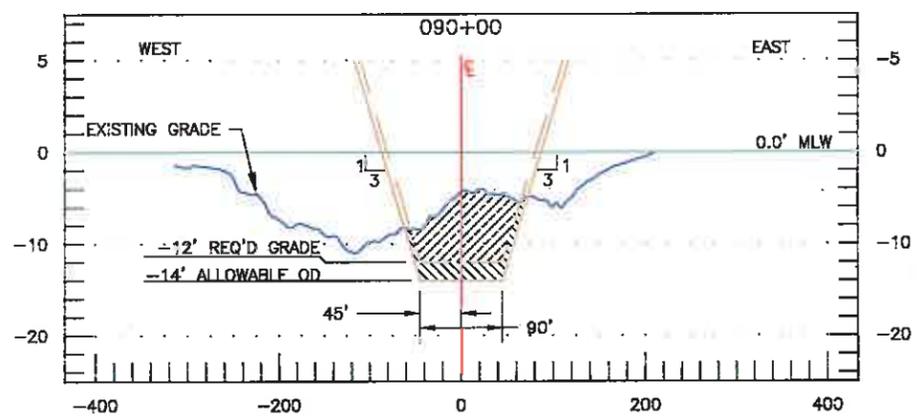
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NC REGISTERED ENGINEERING FIRM P-0743

**AIWW MAINTENANCE DREDGING PROJECT
 TANGENT 12, SECTION 3
 MASON CREEK CROSSING
 NEW HANOVER COUNTY, NC**

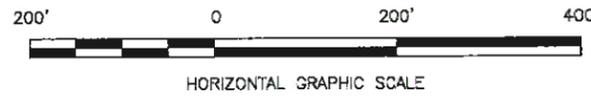
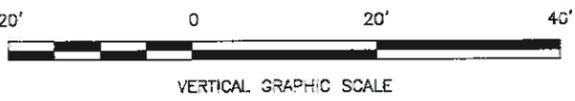
AIWW AND WIDENER CROSS SECTIONS

DWG DATE: 15 JULY 2016 DWG: M/RP160708-AIWW-Clearance.dwg
 DRAWN: J. MCCLURE CHECKED: C. MARELLO ENGR: C. BRYANT
 SCALE: 1" = 200' SHEET: 8 OF 8 REV: 0



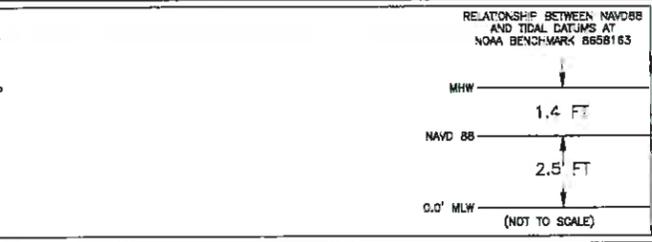
LEGEND	
	REQUIRED GRADE DREDGE TEMPLATE
	ALLOWABLE OVERDEPTH DREDGE TEMPLATE
	REQUIRED GRADE
	ALLOWABLE OVERDEPTH

**FOR PERMITTING PURPOSES
NOT FOR CONSTRUCTION**



REV	REVISIONS	DATE	APP

NOTES:
 1. THE INFORMATION DEPICTED HERE REPRESENTS THE RESULTS OF CONDITIONAL SURVEYS MADE ON 08 JULY 2019 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITION EXISTING AT THAT TIME.
 2. HORIZONTAL COORDINATES ARE IN U.S. SURVEY FEET AND ARE REFERENCED TO U.S. STATE PLANE NORTH CAROLINA, NAD 83.
 3. HORIZONTAL POSITIONING WAS OBTAINED USING RTK GPS REFERENCED TO SURVEY MONUMENT ROOFTOP SHELL ISLAND.
 X: 2270,248.41
 Y: 179,185.27
 Z: -94.23 NAVD 88
 4. ELEVATIONS ARE IN U.S. FEET AND ARE REFERENCED TO 0.0' MLW.
 5. SCALE IS 1" = 20' WHEN PLOTTED AS 17" X 11".



CHRISTOPHER T. MARELLO
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NC REGISTERED ENGINEERING FIRM P-0743

AIWW MAINTENANCE DREDGING PROJECT
 TANGENT 12, SECTION 3
 MASON CREEK CROSSING
 NEW HANOVER COUNTY, NC

AIWW CROSS SECTIONS

DWG DATE:	15 JULY 2018	DWG:	MRP180708-AIWW-Clearance.dwg
DRAWN:	J. MCCLURE	CHECKED:	C. MARELLO
SCALE:	1" = 20'	SHEET:	5 OF 8
		ENGR:	C. BRYANT
		REV:	C

NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT
AND NATURAL RESOURCES
AND COASTAL RESOURCES COMMISSION
PERMIT #151-01
2012 MINOR MODIFICATION
AND ORIGINAL PERMIT

ADDITIONAL CONDITIONS

- 3) Hydraulic pipelines shall not be placed in any area of Coastal Wetland.
- 4) Excavation shall not take place outside of the areas indicated on the attached workplan drawings.

Beach Deposition and Nourishment

- 5) In order to protect threatened and endangered species, and to minimize adverse impacts to offshore, nearshore, intertidal and beach resources, no beach nourishment activity shall occur from April 1 to November 15 of any year without prior approval from the North Carolina Division of Coastal Management in consultation with the NC Division of Marine Fisheries and the NC Wildlife Resources Commission.

NOTE: The permittee is advised that there may be additional timing restrictions placed on the authorized project by the U.S. Army Corps of Engineers as part of the Federal permitting process. Nothing in this State Permit should be construed as overriding or superceding any such Federal permit requirement.

- 6) In order to ensure that adverse impacts do not occur to nesting sea turtles as a result of the formation of a scarp or from substrate compaction, the permittee shall undertake remedial action (i.e. ripping or tilling of the nourished beach, leveling out the scarp) at the request of either the U.S. Army Corps of Engineers, the US Fish and Wildlife Service, or the Division of Coastal Management (in consultation with the N.C. Wildlife Resources Commission).
- 7) Prior to the initiation of any beach nourishment activity above the normal high water contour (NHW) within the limits of the permittee's jurisdiction, easements or similar legal instruments shall be obtained from all property owners.
- 8) The transport of sand by truck shall be carried out in a manner that does not result in any direct impacts to existing dunes or emergent beach vegetation.
- 9) All created dune and/or berm areas shall be immediately planted with appropriate dune vegetation.
- 10) This permit authorizes beach nourishment activities to be carried out one (1) time along the entire reach of the requested nourishment area. Any request to carry out additional activities within an area where nourishment activities have been completed under this permit shall require a modification of this permit.
- 11) Temporary dikes shall be used to retain and direct flow of material parallel to the shoreline to minimize surf zone turbidities. The temporary dikes shall be removed and the beach graded in accordance with approved profiles upon completion of pumping activities.

ADDITIONAL CONDITIONS

- 12) Only beach quality sand shall be used for beach nourishment purposes. Furthermore, sand of similar grain size to the existing beach shall be used to reduce any changes in physical characteristics of the beach. Any non-beach quality material shall be disposed of in an approved upland disposal area.
- 13) Should the dredging or excavation operations encounter any non-beach compatible sand, the dredge shall immediately cease operation and move to an approved area where suitable material does exist.
- 14) In order to prevent leakage, dredge pipes shall be routinely inspected. If leakage is found and repairs cannot be made immediately, pumping of material shall stop until such leaks are fixed. In such a case, the Division of Coastal Management shall immediately be contacted to determine if additional remedial actions shall be necessary.
- 15) The authorized activities shall not cause an unacceptable interference with the public's use of the beach.

Mitigation

NOTE: The permittee is reminded that all mitigation conditions found in the original of Permit 151-01 are still in force and shall be strictly adhered to, unless relief or modification of these conditions has been officially granted by DCM through permit modification.

Future Maintenance Excavation Events

- 16) Each future request for maintenance excavation and subsequent beachfront disposal shall require a modification of this Coastal Area Management Act/State Dredge and Fill Law Permit. Furthermore, should the relocated inlet migrate outside of the inlet corridor area indicated on the workplan drawings submitted with the permit application, a major modification of the permit shall be required. The permittee is advised that the factors to be considered in reaching a decision on any such modification request will include the migration of the new inlet, amount of material to be excavated, season of the proposed work, information collected during the various monitoring efforts following initial project completion, success of the proposed wetland mitigation area, construction methodology, etc.

NOTE: The permittee is advised that future maintenance request should be driven solely by the movement or shoaling in of the new inlet, not by the need for sand for beach nourishment purposes.

General

- 17) The temporary placement or double handling of excavated or fill materials within waters or vegetated wetlands is not authorized.

ADDITIONAL CONDITIONS

- 18) The permittee is advised that the State of North Carolina claims title to any currently submerged lands raised above the mean high water line as a result of this project. The public shall have rights of use of such newly created public beach.
- 19) This minor modification shall be attached to the original of Permit No. 151-01, which was issued on 11/28/01, as well as all subsequent modifications, renewals and refinements, and copies of all documents shall be readily available on site when a Division representative inspects the project for compliance. All conditions and stipulations of the active permit remain in force under this major modification unless specifically altered herein.

NOTE: This permit does not eliminate the need to obtain any additional permits, approvals or authorizations that may be required, including but not limited to a permit from the U.S. Army Corps of Engineers.

NOTE: The permittee and/or his contractor is urged to meet with a representative of the Division prior to project initiation.

NOTE: The expiration date of this permit has been extended in accordance with Session Law 2009-406, as amended by Session Law 2010-177.

Permit Class
NEW

Permit Number
151-01

STATE OF NORTH CAROLINA
Department of Environment and Natural Resources
and
Coastal Resources Commission

Permit

for

Major Development in an Area of Environmental Concern
pursuant to NCGS 113A-118

Excavation and/or filling pursuant to NCGS 113-229

Issued to New Hanover County, 414 Chestnut Street, Wilmington, NC 28401

Authorizing development in New Hanover County at Mason Inlet, adj. Atlantic Ocean, Mason Creek and AIWW, as requested in the permittee's application dated 8/26/99, including

attached the workplan drawings (32), as referenced in Condition No. 1 of this permit

This permit, issued on November 28, 2001, is subject to compliance with the application (where consistent with the permit), all applicable regulations, special conditions and notes set forth below. Any violation of these terms may be subject to fines, imprisonment or civil action; or may cause the permit to be null and void.

- 1) The authorized project shall be done in compliance with the attached workplan drawings, except as modified herein:

Sheets 1-5, all dated 8/26/99
Sheets 6, 7 dated 2/27/01 and revised 11/21/01
Sheet 8 dated 8/24/99 and revised 11/21/01
Sheet 9 dated 2/27/01 and revised 11/21/01
Sheets 10-17 all dated 8/20/99 and revised 11/21/01
Sheet 18-20 all dated 8/20/01 and revised 11/21/01
Sheet 21 dated and revised 11/21/01
Sheets 22-24, all dated 8/26/99
Sheets 25-28, all dated 8/26/99 and revised 11/21/01
Sheets 29-32, all dated 8/26/99

(See attached sheets for Additional Conditions)

This permit action may be appealed by the permittee or other qualified persons within twenty (20) days of the issuing date. An appeal requires resolution prior to work initiation or continuance as the case may be.

This permit must be accessible on-site to Department personnel when the project is inspected for compliance.

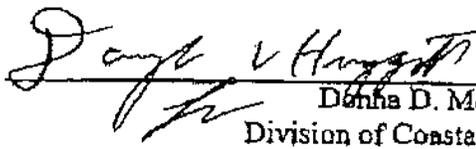
Any maintenance work or project modification not covered hereunder requires further Division approval.

All work must cease when the permit expires on

December 31, 2004

In issuing this permit, the State of North Carolina agrees that your project is consistent with the North Carolina Coastal Management Program.

Signed by the authority of the Secretary of DBNR and the Chairman of the Coastal Resources Commission.


Donna D. Moffitt, Director
Division of Coastal Management

This permit and its conditions are hereby accepted.

Signature of Permittee

ADDITIONAL CONDITIONS**New Inlet Excavation**

- 2) Prior to and within two weeks of the excavation of Figure 8 Island, the temporary placement of approximately 600 linear feet of sheet pile is authorized on the beachfront at the mouth of the proposed new inlet parallel to and just landward of MHW, as depicted on attached workplan drawings 6 and 7, both dated 3/27/01. This sheet pile would allow subsequent excavation of the new inlet channel while preventing an inadvertent breach during storm and spring tide events.
- 3) Removal of the sheet pile structure at the mouth of the new inlet must be initiated during the first tidal cycle following completion of the dredging of the new inlet.
- 4) The depth of excavation of the new inlet shall not exceed -10 feet NGVD.

Sediment Basin

- 5) Based upon commitments made by the permittee, the east-west dimension of the sediment basin is reduced by 100 feet. The limits of the revised sediment basin excavation shall not exceed those indicated on attached workplan drawings 6, 7, and 9, all dated 3/27/01.
- 6) The depth of excavation of the sediment basin, including the portion of the Mason Creek channel running through the sediment basin shall not exceed -12 feet NGVD.

Mason Creek Excavation

- 7) If sedimentation barriers fail to prevent sand movement into the Atlantic Intracoastal Waterway (AIWW), Mason Creek shall be dredged during tidal conditions that prevent tidal flows into the AIWW.
- 8) The dredging of Mason Creek is limited to a bottom width of 80 feet and a width of 140 feet at the 0.0 (NGVD) elevation.
- 9) The depth of excavation of the Mason Creek shall not exceed -10 feet NGVD, except that the portion of Mason Creek that runs through the sediment basin, shall not exceed -12 feet NGVD.
- 10) In order to reduce sedimentation from entering the AIWW during project construction, a +/- 1,000 foot long undredged plug will remain in place near the AIWW, and a temporary sheet pile structure or other approved sedimentation barrier installed near the ocean-side of the plug. The plug and temporary sheet pile or other approved sedimentation barrier shall be removed immediately following completion of the dredging of both the sedimentation basin and the new inlet.
- 11) The final dimensions of the sheet pile structure shall be the absolute minimum necessary to ensure its functionality. The final dimensions, design and location shall be approved by the Division of Coastal Management prior to placement of the structure.

ADDITIONAL CONDITIONS

- 12) Material dredged from Mason Creek will be dewatered and stockpiled in a temporary 8-9 acre diked high ground area on the northern side of the existing inlet. Prior to dredging, material from within the stockpile area shall be bulldozed to create the 15-foot high dike and to deepen the site, allowing the deposition of more dredged material. Additional temporary diked stockpiles may be created and located on the south side of Mason Inlet, on high ground at the north end of the Shell Island Resort, on North Lumina Avenue, or on a portion of the natural beach in front of the Resort.

Closing of Existing Inlet

- 13) Near the completion of the initial phase of Mason Creek dredging, the temporary placement of approximately 600 to 700 linear feet of sheet pile or other approved temporary shoring or siltation barriers across the existing inlet is authorized. The sheet pile or approved temporary shoring/siltation barrier will begin on the ocean-side of the stockpiled dredge material site and extend in a southerly direction to tie into the oceanward face of the sandbag revetment at the Shell Island resort.
- 14) Prior to the initiation of any construction authorized by this permit, a detailed workplan drawing depicting the location of this temporary sheet pile structure or approved temporary shoring/siltation barrier across the mouth of the existing inlet shall be submitted to the Division of Coastal Management for approval.
- 15) Removal of the sheet pile structure or approved temporary shoring/siltation barrier at the mouth of existing inlet must be initiated during the first tidal cycle following the complete closure of the existing inlet. The sheet pile structure or approved temporary shoring/siltation barrier shall be allowed to remain in place for a maximum of 30 days.

NOTE: The Division of Coastal Management will entertain a request by the permittee to modify this permit to allow the sheet pile or approved temporary shoring/siltation barrier to remain in place for slightly more than 30 days only if work has begun and is ongoing on the closure of the existing inlet, and reasonable assurances are provided that the authorized work will be completed in as short a time as possible.

Beach Deposition and Nourishment

- 16) Prior to the initiation of any beach nourishment activity above mean high water (MHW) within the limits of the permittee's authorized beach deposition area, easements or other legal authorities to undertake the authorized activity on each property must be obtained.
- 17) Prior to the initiation of any beach nourishment activity, the existing mean high water line must be delineated and the line approved by representatives from the Division of Coastal Management. The approved lines must be surveyed in and the survey submitted to Division. If nourishment activity is not initiated within sixty (60) days or there is a major shoreline change prior to the commencement of beach nourishment, a new survey must be conducted.

ADDITIONAL CONDITIONS

- c) Ordinances shall be put into place that control and manage vehicular uses of the undeveloped area north of the Town of Carolina Beach.
- d) In accordance with the December 2000 mitigation plan prepared for the proposed project, the permittee shall restore the majority of the 10.7 acre Corps of Engineers Confined Disposal Facility (CDF) located in close proximity to the project site. The mitigation site habitat acreages include:

- Intertidal Marsh	5.2 acres
- High Marsh	2.1 acres
- Sub-Tidal Creeks	1.4 acres
- Bare Sand Area	2.0 acres
- Preservation of adjacent wetlands	19.0 acres

The beach-compatible material to be removed from the CDF may be placed on the beachfront, provided that all conditions of this permit dealing with beach nourishment are strictly adhered to. All monitoring reports associated with this mitigation effort shall be provided to the Division of Coastal Management.

- e) The permittee shall utilize bathymetric surveys and aerial photography required to determine the loss of intertidal areas as a result of project construction and maintenance. Pre-project surveys and post-construction and maintenance surveys will be provided to the Division of Coastal Management with all impacted intertidal areas tabulated. Annual monitoring reports will provide bathymetric surveys and aerial photography indicating the amount of intertidal area in the project area. The permittee shall address any difference between pre-project intertidal areas and the amount of intertidal areas formed following project construction. Proposed remediation for any net loss of intertidal area must be proposed in the third annual monitoring report.
- 25) In order to protect sea turtle nesting habitat, no work may be carried out on the beach between May 1 and November 15 of any year without first obtaining authorization from the Division of Coastal Management, in coordination with the N.C. Wildlife Resources Commission and U.S. Fish and Wildlife Service.
 - 26) In order to ensure protection of all threatened and endangered species, all conditions of the U.S. Army Corps of Engineers Individual Permit relating to such species protection shall be fully implemented.
 - 27) Any additional mitigative measures contained in the National Environmental Policy Act Environmental Assessment document prepared for the proposed project shall be implemented unless specifically altered herein.

ADDITIONAL CONDITIONS

Archaeological Resource Protection

- 28) The N.C. Division of Archives and History has identified one shipwreck in the project area (#01MAI). Extreme care must be exercised when working in proximity to this historic and cultural resources site. The applicant should contact the Division of Archives and History to discuss protection measures for the shipwreck. Furthermore, should any unknown shipwrecks be encountered during the course of the project, all work in that area immediately cease, and the applicant immediately contact both the Division of Coastal Management and the U.S. Army Corps of Engineers so that the appropriate coordination may begin.

Future Maintenance Excavation Events

- 29) Each future request for maintenance excavation and subsequent beachfront disposal will require a modification of this Coastal Area Management Act/State Dredge and Fill Law Permit. Furthermore, should the relocated inlet migrate outside of the inlet corridor area indicated on the workplan drawings submitted with the permit application, a major modification of the permit will be required. The permittee is advised that the factors to be considered in reaching a decision on any such modification request will include the migration of the new inlet, amount of material to be excavated, season of the proposed work, information collected during the various monitoring efforts following initial project completion, success of the proposed wetland mitigation area, construction methodology, etc.

NOTE: The permittee is advised that future maintenance request should be driven solely by the movement or shoaling in of the new inlet, not by the need for sand for beach nourishment purposes.

General

- 30) All conditions and stipulations of 401 Water Quality Certification No. 3274 (Permit No. 000008), which was issued on 4/30/91 and revised on 6/27/01, must be strictly adhered to. Any violation of the Water Quality Certification would also be considered a violation of the CAMA/Dredge and Fill permit.
- 31) No in-water work will be permitted between April 1 and November 15 of any year without the prior approval of the Division of Coastal Management, in consultation with the Division of Marine Fisheries.
- 32) The permittee is advised that the State of North Carolina claims title to any currently submerged lands raised above the mean high water line as a result of this project. The public will have rights of use such newly created public beach.
- 33) All monitoring reports submitted to the U.S. Army Corps of Engineers and/or the N.C. Division of Water Quality must also be provided to the Division of Coastal Management.

NOTE: This permit does not eliminate the need to obtain any additional permits, approvals or authorizations that may be required.

ADDITIONAL CONDITIONS

NOTE:

The permittee and/or his contractor is urged to meet with a representative of the Division prior to project initiation.

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DEPARTMENT OF THE ARMY
REGULATORY DIVISION
CESAW-RG-L
PERMIT #199901052

December 14, 2001

Regulatory Division

Action ID. 199901052

Mr. Dave Weaver
Assistant County Manager
New Hanover County
414 Chestnut Street
Wilmington, North Carolina 28401

Dear Mr. Weaver:

In accordance with your written request, and the ensuing administrative record, enclosed is a Department of the Army (DA) permit to relocate Mason Inlet, excavate Mason Creek, construct a sediment basin, and renourish the southern end of Wrightsville Beach, including maintenance activities for thirty years. The project is located adjacent to the Atlantic Intracoastal Waterway (AIWW) and the Atlantic Ocean, in Wrightsville Beach and Figure Eight Island, New Hanover, North Carolina.

If any change in the authorized work is required because of unforeseen or altered conditions or for any other reason, the plans revised to show the change must be sent promptly to this office. Such action is necessary, as revised plans must be reviewed and the permit modified.

Carefully read your permit. The general and special conditions are important. Your failure to comply with these conditions could result in a violation of Federal law. Certain significant general conditions require that:

- a. You must complete construction before December 31, 2031.
- b. You must notify this office in advance as to when you intend to commence and complete work.
- c. You must allow representatives from this office to make periodic visits to your worksite as deemed necessary to assure compliance with permit plans and conditions.

**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND
REQUEST FOR APPEAL**

Applicant: NEW HANOVER COUNTY		File Number: 199901052	Date: 12 Dec 2001
Attached is:			See Section below
X	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A	
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B	
	PERMIT DENIAL	C	
	APPROVED JURISDICTIONAL DETERMINATION	D	
	PRELIMINARY JURISDICTIONAL DETERMINATION	E	

SECTION I— The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://usace.army.mil/inet/functions/cw/eccwo/reg> or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:
Mr. Keith Harris
U.S. Army Corps of Engineers, Wilmington District
Post Office Box 1890
Wilmington, North Carolina 28402-1890

If you only have questions regarding the appeal process you may also contact:
Mr. Arthur Middleton, Administrative Appeal Review Officer
CESAD-ET-CO-R
U.S. Army Corps of Engineers, South Atlantic Division
60 Forsyth Street, Room 9M15
Atlanta, Georgia 30303-8801

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent	Date:	Telephone number:
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DIVISION ENGINEER:
Commander
U.S. Army Engineer Division, South Atlantic
60 Forsyth Street, Room 9M15
Atlanta, Georgia 30303-3490

DEPARTMENT OF THE ARMY PERMIT

Permittee **NEW HANOVER COUNTY**

Permit No. **199901052**

Issuing Office **CESAW-RG-L**

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: To relocate Mason Inlet, excavate Mason Creek, construct a sediment basin, and renourish the southern end of Figure Eight Island or the northern end of Wrightsville Beach, including maintenance activities for thirty years.

Project Location: Adjacent to the Atlantic Intracoastal Waterway (AIWW) and the Atlantic Ocean, in Wrightsville Beach and Figure Eight Island, New Hanover County, North Carolina.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **December 31, 2031** If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit,

Special Conditions:

SEE ATTACHED SPECIAL CONDITIONS

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

Section 404 of the Clean Water Act (33 U.S.C. 1344).

Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

- e. Damage claims associated with any future modification, suspension, or revocation of this permit.
4. **Reliance on Applicant's Data:** The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.
 5. **Reevaluation of Permit Decision.** This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:
 - a. You fail to comply with the terms and conditions of this permit.
 - b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
 - c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. **Extensions.** General condition 1 establishes a time limit for the completion of the activity authorized by this permit, unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

Ted Davis, Jr. 12/12/01
 (PERMITTEE) NEW HANOVER COUNTY (DATE)

Chairman, New Hanover County Board of Commissioners
 This permit becomes effective when the federal official, designated to act for the Secretary of the Army, has signed below.

James W. DeLony 17 DEC 01
 (DISTRICT ENGINEER) JAMES W. DeLONY, COLONEL (DATE)

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

 (TRANSFEREE) (DATE)

PERMIT CONDITIONS

1. The work will be constructed in strict accordance with the attached plans and all conditions of this permit. In addition, all initial work will be constructed in strict accordance with the construction methods and sequencing as described in Section 1.3 of the Corps Environmental Assessment (EA).
2. The permittee shall conduct all work, both new construction and maintenance, between November 15 and March 30 of any year unless an exemption or extension has been specifically requested from and approved by the Corps of Engineers.
3. The permittee shall not perform any maintenance or other work after completion of initial construction of the project without providing a written report identifying the need for the maintenance event. The permittee must submit this report to the Corps at least 120 days before maintenance activities are anticipated. Each request will include monitoring data and analyses. The Corps will coordinate with other Federal and state resource agencies. The Corps will evaluate each maintenance request to insure that project impacts, including cumulative effects, are reasonable, that the mitigation is appropriate, and that the maintenance cycles are as widely spaced as practicable considering the need of the maintenance activity to stabilize the inlet within the inlet corridor.
4. The permittee shall provide advanced notice and arrange a pre-construction meeting among the Corps, U.S. Fish and Wildlife Service (Service), North Carolina Division of Coastal Management (NCDCM), the applicant, and all contractors within 30 days of construction in order to discuss all permits and permit conditions, and to address all questions and concerns regarding the project. No construction or maintenance event will begin until the applicant and all contractors are aware of and fully understand the intent of all permit conditions.
5. Prior to the start of construction or any maintenance event, bathymetric surveys will be taken of all areas to be temporarily or permanently impacted. These surveys will be submitted to the Corps and include the following: aerial photography; beach and offshore profiles; new inlet area, sedimentation basin area, existing inlet area, Mason Creek area and Atlantic Intracoastal Waterway area. Following completion of the initial construction or any maintenance event, temporary work areas, including stockpiles, will be returned to pre-project contours based on the surveys. Post-project surveys will be taken of all restored temporary work areas. These surveys will be submitted to the Corps for verification that restoration is adequate. Restoration will be considered satisfactory only upon receipt of the Corps' approval.
6. Monitoring is required as follows. At the anniversary of the completion of construction a report will be provided to the Corps analyzing the data and providing an executive summary of impacts of the project and mitigation accomplished. The monitoring requirements will be reviewed and modified as appropriate in conjunction with the Corps review of a maintenance event.

a. The permittee shall establish a minimum of three permanent monitoring transects (minimum distance 600 feet) in Mason Creek to monitor biota (including macro invertebrates) and physical conditions. Pre-construction data will be collected.

b. The permittee shall establish a minimum of one permanent monitoring station in Banks Channel a minimum of 50 feet away from each side of the sediment basin to monitor biota (including macro invertebrates) and water quality. Pre-construction data will be collected.

c. The permittee shall monitor a minimum of twelve transects (between mean high tide and mean low tide along the beach disposal site) on Figure 8 Island for macro invertebrates and bird usage. Pre-construction data will be collected.

7. The permittee shall cooperate with the North Carolina Division of Marine Fisheries (NCDMF) oyster seeding program in the project area by providing dockage and loading facilities for barges used in the NCDMF oyster seeding program. NCDMF will monitor this program to insure that areas seeded are suitable for oyster seeding and seed about 10,000 bushels of oysters annually until the first maintenance event. The Corps will evaluate this mitigation measure for its effectiveness in offsetting fisheries impacts as part of their review of the first maintenance event.

8. Dredging will be timed so that turbidities will be minimized to the maximum extent practicable. *(timed to avoid or halted just before and during storms and other periods of potential high erosion, currents, and waves)*

9. The placement of dredged material in the existing inlet and along the beach will be timed so that turbidities will be minimized to the maximum extent practicable. *(timed to avoid or halted just before and during storms and other periods of potential high erosion, currents, and waves)*

10. The permittee shall not impact mature marsh on the north side of Mason Creek.

11. All sandbags and fragments will be removed from Shell Island Resort area and disposed of properly in accordance with NCDCM requirements.

12. This Corps permit does not authorize the permittee to take an endangered species, in particular the piping plover (*Charadrius melodus*), the seabeach amaranth (*Amaranthus pumulis*), the West Indian manatee (*Trichechus manatus*) the green sea turtle (*Chelonia mydas*), and the loggerhead sea turtle (*Caretta caretta*). In order to legally take a listed species, you must have separate authorization under the Endangered Species Act (ESA) (e.g., an ESA section 10 permit or a Biological Opinion (BO) under ESA section 7, with "incidental take" provisions with which you must comply). The enclosed US Fish and Wildlife Service (Service) BO, dated March 14, 2001, and BO amendment, dated September 5, 2001, contain mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that is also specified in the BO. Your authorization under this Corps permit is conditional upon your compliance with all of the mandatory terms and conditions associated with incidental take of the attached BO, which terms and conditions are incorporated by reference in this permit.

Failure to comply with the terms and conditions associated with incidental take of the BO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute noncompliance with your Corps permit. However, the Service is the appropriate authority to determine compliance with the terms and conditions of its BO, and with the ESA. For further clarification on this point, you should contact the Service. Should the Service determine that the conditions of the BO have been violated, normally the Service will enforce the violation of the ESA, or refer the matter to the Department of Justice.

13. The permittee shall undertake the project with extreme care. If, during construction or any maintenance event, submerged materials are encountered, the permittee shall move work to another area and contact the Corps and the North Carolina Department of Cultural Resources (NCDCCR), Underwater Archaeology Unit immediately at (910) 458-9042 to investigate and determine the proper course of action. The Corps will advise the permittee when construction/maintenance may resume in the area of the archaeological investigation.

14. Shipwreck site 0002MAI, the remains of a wooden sailing ship, is located approximately 200 yards north of the Shell Island resort. Prior to beginning work on the project, the permittee shall provide NCDCCR with detailed plans for closure of the existing inlet. Upon receipt, NCDCCR staff members will attempt to pinpoint the present location and nature of site 0002MAI to assist engineers of the proposed project in avoiding damage to the shipwreck.

Address: NC Department of Cultural Resources
Division of Archives and History
109 East Jones Street
Raleigh, North Carolina 27601-2807

15. The permittee shall implement compensatory wetland mitigation at the same time or prior to beginning project construction as proposed in the applicant's mitigation plan, Attachment 5 of the Corps' EA. Any deviation from the wetland mitigation plan will be coordinated with the Corps and must receive specific approval before being implemented.

16. Within 30 days of permit issuance, the permittee shall develop and implement, in consultation with the North Carolina Department of Environment and Natural Resources, the North Carolina Wildlife Resources Commission, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and the Audubon Society, subject to approval by the Corps, a shorebird and waterbird management plan and biological monitoring plan with regard to issues related to nesting, roosting, and foraging habitat. In the event the Corps determines that the results of those studies indicate that remedial action is necessary, the permittee shall implement any such remedial action directed by the Corps.

17. The Wilmington District routinely surveys the AIWW, including the portion at its intersection with Mason Creek, in order to assess dredging needs for maintenance of navigability of the AIWW. The permittee shall notify the Wilmington District Regulatory Division two weeks prior to the commencement of construction, to allow the District to perform a survey of the area of the AIWW that will be potentially affected by the proposed project.

If the District Engineer, in his sole discretion, determines that shoaling has occurred within the AIWW on Tangent 12, Section 3 between monuments T12-8 and T12-41, at any time during the life of the project and that such section should be dredged in order to maintain safe and efficient navigation on the AIWW, he will so notify the permittee in writing. The notification will specify the area of the AIWW that must be dredged, the depth to which it must be dredged, and the time frame within which dredging must begin (a minimum of 90 days will be allowed). The permittee shall cause the area of the AIWW specified by the District Engineer to be dredged in a manner and within the time frame specified in the notice.

18. Borings of the proposed work area did not reveal the presence of any unsuitable (non-beach compatible) material. The equipment and techniques to be used by the contractors must allow for the inspection of all materials. All material dredged from Mason Creek, and any additional material that is determined to be unsuitable beach material will be pumped to the diked settling area for removal of unsuitable material. The applicant shall test all dredged material for beach compatibility, and provide the tests to the Corps for confirmation before placing material on the beach. Material deemed to be non-beach compatible will not be placed on the beach or in the Corps' dredged material islands, but will be removed from the project area and placed in a high ground site that has received specific approval from the Corps, NCDQM, and the North Carolina Division of Land Quality.

19. The permittee shall maintain the dike walls constructed around holding areas for dredged material to eliminate the release or escape of dredged material. Failure of a dike wall will result in the immediate cessation of pumping into the specific diked area. Repair work on dike walls will not begin until specific permission is requested and received from the Corps and NCDQM with the exception of work necessary to provide emergency repair of dike wall failures.

20. The permittee shall comply with the attached US Coast Guard regulations.

21. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

In addition, the permittee shall notify

NOAA/NATIONAL OCEAN SERVICE
Chief Source Data Unit
Attention: Sharon Tear N CS261
1315 E West HWY RM 7316
Silver Spring, MD 20910-3282

at least two weeks prior to beginning work and upon completion of work.

22. The project will only be maintained for inlet stabilization purposes per the Inlet Management Plan (Section 1.4 of the Corps EA).

23. The applicant will comply with all conditions of the 401 Water Quality Certification No. 3274, issued April 30, 2001 and modified on June 27, 2001 (Attachment 6 of the Corps' EA).

24. The applicant will comply with all conditions of the State Permit issued by NCDCM.

25. The permittee shall utilize bathymetric surveys and aerial photography required in Condition 5 to determine the loss of intertidal areas as a result of project construction and maintenance. Preproject surveys and post-construction and -maintenance surveys will be provided to the Corps with all impacted intertidal areas tabulated. Annual monitoring reports, provided to the Corps, North Carolina Department of Environment and Natural Resources, the North Carolina Wildlife Resources Commission, the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service, will provide bathymetric surveys and aerial photography indicating the amount of intertidal areas in the project area. The permittee shall address any difference between preproject intertidal areas and the amount of intertidal areas formed post-construction and propose appropriate remediation in the third annual monitoring report and update the analyses in each annual report thereafter.

NORTH CAROLINA
DIVISION OF WATER QUALITY
401 CERTIFICATION
WQC PROJECT #000008



Michael F. Easley
Governor

Sheri Evans-Stanton, Acting Secretary
Department of Environment and Natural Resources

Kerr T. Stevens
Division of Water Quality

June 27, 2001

401 CERTIFICATION

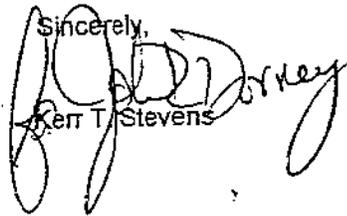
Mr. Greg Thompson
New Hanover County
414 Chestnut Street
Wilmington, NC 28401

Dear Mr. Thompson:

Re: Revised Certification Pursuant to Section 401 of the Federal Clean Water Act,
Proposed Mason's Inlet relocation and associated dredging
WQC Project #000008
New Hanover County

Attached hereto is a copy of the revised Certification No.3274 issued to New Hanover County dated June 27, 2000. This Certification replaces one issued to you on April 30, 2001. If we can be of further assistance, do not hesitate to contact us.

Sincerely,



Kerr T. Stevens

Attachments

cc: Corps of Engineers Wilmington Field Office
Wilmington DWQ Regional Office
Doug Huggett, Division of Coastal Management
File Copy
Central Files
Karyn Erickson Applied Technology & Management of N.C., Inc. 201 Front Street, Ste 201
Wilmington, NC 28402
Steve Morrison; Land Management Group, Post Office Box 2522, Wilmington, NC 28402





Michael F. Easley
Governor

Sherri Evans-Stanton, Acting Secretary
Department of Environment and Natural Resources

Kerr T. Stevens
Division of Water Quality

NORTH CAROLINA 401 WATER QUALITY CERTIFICATION

THIS CERTIFICATION is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Quality (DWQ) Regulations in 15 NCAC 2H, Section .0500. It is issued to New Hanover County resulting in 1.9 acres of wetland impact 49 acres of open water dredging and 41 acres of open water fill in New Hanover County pursuant to an application filed on the 4 day of June, 2000 with the final EA/FONSI and letter dated January 8, 2001 from Applied Technology and Management of N.C., Inc. to relocate Mason's Inlet.

The application provides adequate assurance that the discharge of fill material into the waters of the Atlantic Ocean (Mason's Inlet) and Mason's Creek in conjunction with the proposed development will not result in a violation of applicable Water Quality Standards and discharge guidelines. Therefore, the State of North Carolina certifies that this activity will not violate the applicable portions of Sections 301, 302, 303, 306, 307 of PL 92-500 and PL 95-217 if conducted in accordance with the application and conditions hereinafter set forth.

This approval is only valid for the purpose and design that you submitted in your application, as described in the Public Notice. If you change your project, you must notify us and send us a new application for a new certification. If the property is sold, the new owner must be given a copy of the Certification and approval letter and is thereby responsible for complying with all conditions. If total wetland fills for this project (now or in the future) exceed one acre or total perennial stream impact exceeds 150 feet, compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). For this approval to be valid, you must follow the conditions listed below. In addition, you should get any other federal, state or local permits before you go ahead with your project including (but not limited to) Sediment and Erosion control, Coastal Stormwater, Non-discharge and Water Supply watershed regulations.

Condition(s) of Certification:

1. Appropriate sediment and erosion control practices which equal or exceed those outlined in the most recent version of two manuals, either the "North Carolina Sediment and Erosion Control Planning and Design Manual" or the "North Carolina Surface Mining Manual" (available from the Division of Land Resources in the DEHNR Regional or Central Offices). The control practices shall be utilized to prevent exceedances of the appropriate turbidity water quality standard (50 NTUs in all fresh water streams and rivers not designated as trout waters; 25 NTUs in all lakes and reservoirs, and all saltwater classes; and 10 NTUs in trout waters);
2. All sediment and erosion control measures placed in wetlands or waters shall be removed and the natural grade restored after the Division of Land Resources has released the project;
3. Measures shall be taken to prevent live or fresh concrete from coming into contact with waters of the state until the concrete has hardened;
4. Should waste or borrow sites be located in wetlands or other waters, compensatory mitigation will be required since it is a direct impact from road construction activities;
5. Compensatory mitigation shall be done as outlined in the final EA/FONSI with the following additions:
 - a) Biological monitoring shall be for three (3) transects rather than the two proposed,
 - b) Biological monitoring shall be for five years. Three copies of annual reports shall be sent to DWQ for review and comment and recommended modifications shall be implemented to ensure success,





Michael F. Easley
Governor

Sherri Evans-Stanton, Acting Secretary
Department of Environment and Natural Resources

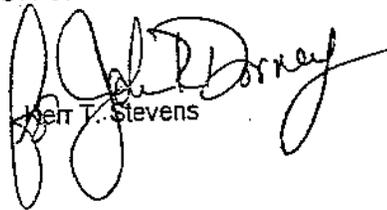
Kerr T. Stevens
Division of Water Quality

6. Applicant shall submit within four months for written DWQ approval a plan to monitor marshes adjacent to Mason's Creek. This plan shall included measure, to compare the predicted water velocities to help understand and compensate for any observed impacts to marshes. If this monitoring reveals an additional loss of wetlands in this area, then additional compensatory wetland mitigation will be required.
7. All other conditions of General Certification #3274 are hereby incorporated by reference.

Violations of any condition herein set forth shall result in revocation of this Certification and may result in criminal and/or civil penalties. This Certification shall become null and void unless the above conditions are made conditions of the Federal 404 and/or coastal Area Management Act Permit. This Certification shall expire upon expiration of the 404 or CAMA permit.

If this Certification is unacceptable to you have the right to an adjudicatory hearing upon written request within sixty (60) days following receipt of this Certification. This request must be in the form of a written petition conforming to Chapter 150B of the North Carolina General Statutes and filed with the Office of Administrative Hearings, P.O. Box 27447, Raleigh, N.C. 27611-7447. If modifications are made to an original Certification, you have the right to an adjudicatory hearing on the modifications upon written request within sixty (60) days following receipt of the Certification. Unless such demands are made, this Certification shall be final and binding.

This the 27TH day of June, 2001
DIVISION OF WATER QUALITY


Kerr T. Stevens





Michael F. Easley
Governor

Sherri Evans-Stanton, Acting Secretary
Department of Environment and Natural Resources

Kerr T. Stevens
Division of Water Quality

DWQ Project No.: _____ County: _____
Applicant: _____
Date of Issuance of 401 Water Quality Certification: _____

Certificate of Completion

Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, the applicant is required to return this certificate to the 401/Wetlands Unit, North Carolina Division of Water Quality, 1621 Mail Service Center, Raleigh, NC, 27699-1621. This form may be returned to DWQ by the applicant, the applicant's authorized agent, or the project engineer. It is not necessary to send certificates from all of these.

Applicant's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.
Signature: _____ Date: _____

Agent's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.
Signature: _____ Date: _____

If this project was designed by a Certified Professional

I, _____, as a duly registered Professional _____ (i.e., Engineer, Landscape Architect, Surveyor, ect.) in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project, for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.
Signature _____ Registration No. _____ Date _____



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NORTH CAROLINA
SHPO LETTER



North Carolina Department of Cultural Resources

James B. Hunt Jr., Governor
Betty Ray McCain, Secretary

Division of Archives and History
Jeffrey J. Crow, Director

October 13, 1997

Steve Morrison
Environmental Consultant
Land Management Group, Inc.
P.O. Box 2522
Wilmington, NC 28402

Re: Request for information concerning the
preparation of an environmental assessment for
the proposed dredging in and near Mason's Inlet,
New Hanover County

Dear Mr. Morrison:

As requested, members of our Underwater Archaeology Unit reviewed the proposed dredging of Mason's Inlet, Mason's Inlet Creek, Banks Channel, and Rich Inlet Creek and determined that the dredging constitutes a major bottom disturbance.

A review of historical records indicates that these channels were shallow and seldom used. In addition, Mason's Inlet and Rich Inlet have been unstable and prone to move north and south thus altering channel alignments. Recently, significant portions of Banks Channel and Rich Inlet Creek have been dredged.

Based on this information, the proposed dredging occurs in an area that holds a low to moderate potential for containing submerged cultural remains. We, therefore, recommend that no underwater archaeological investigation be conducted in connection with the dredging portion of the project.

We would like to notify you that this project should be undertaken with extreme caution. If during construction submerged materials are encountered, work should move to another area and our Underwater Archaeology Unit be contacted immediately (910/458-9042). A staff member will be sent to make an assessment of the remains and determine the proper course of action.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763.

Sincerely,

A handwritten signature in cursive script that reads "David Brook".

David Brook
Deputy State Historic Preservation Officer

DB:slw

cc: John Parker, Division of Coastal Management
Wayne Wright, Army Corps of Engineers, Wilmington