

PROJECT MANUAL

FOR

Kitty Hawk Park Connector Trail Project



**TOWN OF
KITTY HAWK**

Prepared for

The Town of Kitty Hawk

PO Box 549,
Kitty Hawk, NC 27949

January 11, 2021

Bid Documents

Prepared by
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John M DeLucia
1/11/21

Kitty Hawk Park Connector Trail Project

TABLE OF CONTENTS

COVER PAGE

TABLE OF CONTENTS

ADVERTISEMENT FOR BIDS

INSTRUCTIONS TO BIDDERS

FORM OF PROPOSAL

GENERAL TERMS AND CONDITIONS

TECHNICAL SPECIFICATIONS

01010	Summary of Work	1 – 4
01040	Project Coordinator	1 – 3
01090	Definitions & Standards	1 – 4
01200	Project Meetings	1 – 2
01300	Submittals	1 – 5
01500	Temporary Facilities	1 – 4
01600	Materials & Equipment	1 – 4
01700	Project Closeout	1 – 6
032200	Crushed Granite Trails	1 -- 2
061500	Boardwalk Construction	1 – 2



ADVERTISEMENT FOR BIDS

Sealed Bids for the Kitty Hawk Park Connector Trail Project will be received by the Town Clerk of the Town of Kitty Hawk, North Carolina in the Town Hall located at 101 Veterans Memorial Drive, NC 27949 until 10:00 AM on February 1, 2021, at which time they will be publicly opened and read aloud.

Complete plans and specifications may be obtained from the Town website found at <https://www.kittyhawknc.gov/>

There will be a pre-bid conference for this project on Wednesday, January 20 at 10:00 AM at the Project location at Kitty Hawk Park, 900 W Kitty Hawk Rd., Kitty Hawk, NC.

All Contractors submitting bids shall possess a valid North Carolina Contractor's License. A Certificate of General Liability Insurance (minimum \$ 1,000,000) and proof of workers compensation insurance shall be attached to each bid for consideration.

The bidder to whom this project is awarded shall have sixty (60) calendar days from the date of contract Notice to Proceed to complete the terms of the contract for this project. The Town of Kitty Hawk reserve the right to reject any or all bids.

Posted, town website and advertised in The Coastland Times this 13th day of January 2021. Lynn U. Morris, Kitty Hawk Town Clerk.

**INSTRUCTIONS TO BIDDERS
AND
SPECIFICATIONS**

Kitty Hawk Park Connector Trail Project

**Town of Kitty Hawk, NC
January 11, 2021**

INSTRUCTIONS TO BIDDERS

All Contractors submitting bids shall possess a valid North Carolina Contractors License. A Certificate of General Liability Insurance (minimum \$ 1,000,000) and Workers Compensation Insurance shall be attached to each bid submitted for consideration.

Bids for this project shall be separated and marked in the following manner:

1. A copy of the contractor's license, Certificate of General Liability Insurance and Workers Compensation Insurance and shall be placed in an envelope numbered "Envelope #1" and marked as to its contents.
2. The bids submitted shall be placed in a separate envelope numbered "Envelope #2" and marked as to its contents.
3. The items listed above shall constitute each company's bid. Each bid shall be submitted in a sealed envelope, so marked as to indicate its contents without being opened. This envelope shall be placed in another one addressed to the Town of Edenton.

Bids shall be received for this project and should be placed on the attached bid form. The Town intends to award this project to the responsible bidder.

Bids may be delivered directly to The Town of Kitty Hawk 101 Veterans Memorial Drive, NC 27949 or mailed to the Town Clerk at PO Box 549, Kitty Hawk, NC 27949. Bids will be accepted until 10:00 am on Monday February 1, 2021.

Attendance at any and all pre-bid conferences is not mandatory for participation in this project.

The bidder to whom the project is awarded shall have Sixty (60) calendar days from the Notice to Proceed to complete the terms of the contract for this project.

The Town of Kitty Hawk, in accordance with its goals adopted for participation by minority businesses, encourages minority businesses to submit bids for this construction project. The Town of Kitty Hawk shall award public contracts without regard to race, religion, color, creed, national origin, sex, age or handicapping condition, as defined by North Carolina Statutes, Section 168A-3. All Contractors submitting bids for this project shall verify to the Town of Kitty Hawk that such Contractor does not discriminate in the employment of any subcontractors nor does it discriminate in the purchase of materials or equipment for reason of race, religion, color, creed, national origin, sex, age, or handicapping condition as defined by North Carolina General Statutes, Section 168A-3.

The final award of this project will be subject to the approval of the Town Council. The Town of Kitty Hawk reserves the right to reject any or all bids, or any combination thereof. The estimated construction cost allows these projects to be bid following an "Informal" process.

Project Schedule

1. (On or about) Monday, January 11, 2021 - **Bid specifications to be provided to prospective bidders via the Town website located at <https://www.kittyhawknc.gov>**
2. On Wednesday January 20 at 10:00 am - **Pre-bid Conference** – At the site in Kitty Hawk Park 900 W Kitty Hawk Rd Kitty Hawk, North Carolina at which time detailed supplemental information shall be available. Attendance is not mandatory.
3. On Monday February 1, 2021 at 10:00 am - **Bid Opening**
4. On Monday, February 1, 2021 - **Presentation of bids for Approval** by the Town Council of Kitty Hawk.
5. (On or about) February 15, 2021 - **Pre-Construction Meeting** at the Project Site

Project Completion

Sixty (60) days from the date of the Notice to Proceed **project is to be completed**. This date to be finalized at the time the contract is executed by the Contractor and established in the Notice to Proceed.

Liquidated Damages

The Owner shall be entitled to retain or recover from Contractor as liquidated damages and not as a penalty, \$200.00 per day commencing upon following the Project Completion date and continuing until the actual date of Project Completion. Such liquidated damages are agreed to be a reasonable pre-estimate of damages the Owner will incur as a result of a delayed completion of the Project. The Owner may deduct liquidated damages from any unpaid amounts due Contractor and any liquidated damages not so deducted shall be payable to Owner by the Contractor upon demand by Owner together with interest at the legal rate if not paid within thirty (30) days of the demand.”

PROPOSAL

Project: Kitty Hawk Park Connection

Contract: _____

Trail Project

Bidder: _____

Date: _____

The undersigned, as bidder, hereby declares that the only person or persons interested in this proposal as principal or principals is or are named herein and that no other person than herein mentioned has any interest in this proposal or in the contract to be entered into; that this proposal is made without connection with any other person, company or parties making a bid or proposal; and that it is in all respects fair and in good faith without collusion or fraud. The bidder further declares that he has examined the site of the work and the contract documents relative thereto, and has read all special provisions furnished prior to the opening of bids; that he has satisfied himself relative to the work to be performed.

The Bidder proposes and agrees if this proposal is accepted to contract with the Town of Kitty Hawk in the form of contract specified, to furnish all necessary materials, equipment, machinery, tools, apparatus, means of transportation and labor necessary to complete the construction of:

Kitty Hawk Park Connection Trail Project

in full in complete accordance with the plans, specifications and contract documents, to the full and entire satisfaction of the Town of Kitty Hawk (Owner) with a definite understanding that no money will be allowed for extra work except as set forth in the General Conditions and the contract documents, for the sum of:

BASE BID

Item	Unit	Anticipated Units	Unit Price	Cost
Mobilization	Lump Sum	1		
6' wide Wooden Boardwalk	Linear Foot	330		
6' wide Granite Pathway	Linear Foot	210		
* Excavation & Removal of Substandard Materials	Cubic Yard	10		
* Replacement of Suitable Sand Materials	Cubic Yard	10		
* Erosion Control Silt Fencing	Linear Foot	100		
* Seeding and Mulching	Square Yard	200		
			Total Base Bid	

*item allowance to be field determined based on need

Unit prices listed in the BASE BID above will be used to determine final project costs based upon the actual units constructed.

The bidder further proposes and agrees hereby to commence work under this contract on a date to be specified in a written order of the designer and shall fully complete all work there under within Sixty

(60) consecutive calendar days from and including said date. Applicable liquidated damages shall be stated in the Instruction to Bidders.

Respectfully submitted this _____ day of _____ 20____.

(Name of firm or corporation making bid)

WITNESS:

By:

(Proprietorship or Partnership)

Title: _____
(Owner/Partner/Pres./Vice Pres.)

Address: _____

License No.: _____

Federal I.D. No.: _____

Phone No.: _____

Email.: _____

General Conditions of Contract

ARTICLE I - DEFINITIONS

- a The **contract documents** consist of Instructions to Bidders; General Conditions of the Contract; project schedule; and the project drawings (as prepared by Albemarle & Associates, Ltd.) and specifications, including all bulletins, addenda or other modifications of the drawings and specifications incorporated into the documents prior to their execution; the proposal; the contract; the performance bond; the payment bond; insurance certificates. All of these items together form the contract documents.
- b The **owner** is the Town of Kitty Hawk.
- c The **Contractor** as referred to hereinafter, shall be called the "Party of the First Part" in connection with the total project.
- d A **subcontractor**, as the term is used herein, shall be understood to be one who entered into a direct contract with a contractor, and includes one who furnishes materials worked to a special design in accordance with plans and specifications covered by the contract, but does not include one who only sells or furnishes materials not requiring work so described or detailed.
- e **Written notice** shall be defined as notice in writing delivered in person to the contractor, or to a partner of the firm in the case of a partnership, or to a member of the contracting organization, or to an officer of the organization in the case of corporation, or sent to the last known business address of the contracting organization by registered mail.
- f **Work**, as used herein as a noun, is intended to include materials, labor and workmanship of the appropriate contractor.
- g The **project** is the total construction work to be performed under the contract documents by the Contractor.
- h **Change order**, as used herein shall mean a written order to the Contractor subsequent to the signing of the contract authorizing a change in the contract. The change order shall be signed by the Contractor, and Engineer, and approved by the Owner, in that order.
- i **Time of completion**, as stated in the contract documents, is to be interpreted as consecutive calendar days measured from the date established in the written Notice to Proceed.
- j **Surety**, as used herein, shall mean the bonding company or corporate body which is bound with and for the Contractor, and which engages to be responsible for the Contractor and his acceptable performance of the work.
- k **Weather of normal intensity**, that which has been identified by the Cape Hatteras National Weather Station as average and common for the time of year.

ARTICLE 2 - INTENT AND EXECUTION OF DOCUMENTS

- a The drawings and specifications are complementary, one to the other. That which is shown on the drawings or called for in the specifications shall be as binding as if it were both called for and shown. The intent of the drawings and specifications is to establish the scope of all labor, materials, transportation, equipment, and any and all other things necessary to provide a complete job. In case of discrepancy or disagreement in the contract documents, the order of precedence shall be: Form of Contract, specifications, large-scale detail drawings, small-scale drawings.

- b The wording of the specifications shall be interpreted in accordance with common usage of the language except that words having a commonly used technical or trade meaning shall be so interpreted in preference to other meanings.
- c The Contractor shall execute each copy of the proposal, contract, performance bond and payment bond (**BONDS ARE NOT REQUIRED FOR THIS PROJECT**) as follows:
 - 1 If the documents are executed by a sole owner, that fact shall be evidenced by the word "Owner" appearing after the name of the person executing them.
 - 2 If the documents are executed by a partnership, that fact shall be evidenced by the word "Owner" appearing after the name of the person executing them, and the authority to execute the same must be attached.
 - 3 If the documents are executed on the part of a corporation, they shall be executed by either the president or the vice president and attested by the secretary or assistant secretary in either case, and the title of the office of such persons shall appear after their signatures. The seal of the corporation shall be impressed on each signature page of the documents.
 - 4 If the documents are made by a joint venture, they shall be executed by each member of the joint venture in the above form for sole owner, partnership or corporation, whichever form is applicable to each particular member, and executed by each particular member in their respective capacities.
 - 5 All signatures shall be properly witnessed.
 - 6 If the Contractor's license is held by a person other than an owner, partner or officer of a firm then the licensee shall also sign and be a party to the contract. The title "Licensee" shall appear under his/her signature.
 - 7 The bonds shall be executed by an attorney-in-fact. There shall be attached to each copy of the bond a certified copy of power of attorney properly executed and dated.
 - 8 Each copy of the bonds shall be countersigned by an authorized individual agent of the bonding company licensed to do business in North Carolina. The title "Licensed Resident Agent" shall appear after the signature.
 - 9 The seal of the bonding company shall be impressed on each signature page of the bonds.
 - 10 The Contractor's signature on the performance bond and the payment bond shall correspond with that on the contract.

ARTICLE 3 - MATERIALS, EQUIPMENT, EMPLOYEES

- a The Contractor shall, unless otherwise specified, supply and pay for all labor, transportation, materials, tools, apparatus, lights, power, heat, sanitary facilities, water, scaffolding and incidentals necessary for the completion of his work, and shall install, maintain and remove all equipment of the construction, other utensils or things, and be responsible for the safe, proper and lawful construction, maintenance and use of same, and shall construct in the best and most workmanlike manner, a complete job and everything incidental thereto, as shown on the plans, stated in the specifications, or reasonably implied therefrom, all in accordance with the contract documents.
- b All materials shall be new and of quality specified, except where reclaimed material is authorized herein and approved for use. Workmanship shall at all times be of a grade acceptable as the best practice of the particular trade involved, and as stipulated in written standards of recognized

organizations or institutes of the respective trades except as exceeded or qualified by the specifications.

- c Upon notice, the Contractor shall furnish evidence as to quality of materials.
- d Whenever products, materials or equipment are named in the specifications, the specifications shall be interpreted to mean an item of material or equipment similar to that named and which is suited for the same use and capable of performing the same function as that named.
- e The Contractor shall obtain written approval from the owner for the use of substitute products, materials or equipment claimed as equal to those specified. Such approvals must be obtained as soon after contract awards as possible and before any materials are ordered. Applications for approvals shall be made by the Contractor and not by subcontractors or material suppliers. The Contractor shall submit within five (5) days following award of contract a complete list of materials proposed for the job. When this list is approved, no further substitutions will be permitted except in unusual or extenuating circumstances. If no list is submitted, the Contractor shall supply materials specified.
- f The owner shall be the judge of equality for proposed substitution of products, materials or equipment.
- g If at any time during the construction and completion of the work covered by these contract documents, the conduct of any workman of the various crafts be adjudged a nuisance to the owner, or if any workman be considered detrimental to the work, the Contractor shall order such parties removed immediately from grounds.

ARTICLE 4 - PROTECTION OF WORK, PROPERTY AND THE PUBLIC

- a The Contractor shall be responsible for the entire site and the building or construction of the same and provide all the necessary protections, as required by the owner, and by laws or ordinances governing such conditions. They shall be responsible for any damage to the owner's property, or that of others on the job by them, their personnel, or their subcontractors, and shall make good such damages. They shall be responsible for and pay for any claims against the owner. The Contractor shall have access to the project at all times.
- b The Contractor shall provide cover and protect all portions of the structure when the work is not in progress. Any work damaged through the lack of proper protection or from any other cause, shall be repaired or replaced without extra cost to the owner.
- c No fires of any kind will be allowed around the operations during the course of construction without special permission from the owner.
- d The Contractor shall protect all trees, shrubs and dunes designated to remain in the vicinity of the operations. He shall barricade all walks, roads, etc., as directed by the owner to keep the public away from the construction. All trenches, excavations or other hazards in the vicinity of the work shall be well barricaded and properly lighted at night.
- e The Contractor shall provide all necessary safety measures for the protection of all persons on the job, including the requirements of the AGC Accident Prevention Manual in Construction, as amended, and shall fully comply with all state laws or regulations and North Carolina State Building Code requirements to prevent accident or injury to persons on or about the location of the work. He shall clearly mark or post signs warning of hazards existing, and shall barricade excavations, stairwells, and similar hazards. He shall protect against damage or injury resulting from falling materials and he shall maintain all protective devices and signs throughout the progress of the work.

- f The Contractor shall adhere to the rules, regulations and interpretations of the North Carolina Department of Labor relating to Occupational Safety and Health Standards for the Construction Industry (Title 29, Code of Federal Regulations, Part 1926, published in Volume 39, Number 122, Part II, June 24, 1974, *Federal Register*), and revisions thereto as adopted by General Statutes of North Carolina 95-126 through 155.
- g The Contractor shall designate a responsible member of his organization as safety inspector, whose duties shall include accident prevention on the work project. The name of the safety inspector shall be made known to the owner at the time the work is started.
- h In the event of emergency affecting the safety of life, the protection of work, or the safety of adjoining properties, the Contractor is hereby authorized to act at his own discretion, without further authorization from anyone, to prevent such threatened injury or damage. Any compensation claimed by the Contractor on account of such action shall be determined as provided for under Article 10(c).
- i The contractor shall adhere to the rules, regulations, and interpretations of the Federal Highway Administration relating to Part IV, Manual on Uniform Traffic Control Devices (MUTCD) Standards and Guides for Traffic Controls for Street and Highway Construction, Maintenance, Utility, and Incident Management Operations (Current Edition of MUTCD).

ARTICLE 5 - SEDIMENTATION POLLUTION CONTROL ACT OF 1973

- a Any land-disturbing activity performed by the Contractor in connection with the project shall comply with all erosion control measures set forth in the contract documents and any additional measures which may be required in order to ensure that the project is in full compliance with the Sedimentation Pollution Control Act of 1973, as implemented by Title 15, North Carolina Administrative Code, Chapter 4, Sedimentation Control, Subchapters 4A, 4B and 4C, as amended (15 NCAC 4A, 4B, and 4C).
- b Upon receipt of notice that a land-disturbing activity is in violation of said act, the Contractor shall be responsible for ensuring that all steps or actions necessary to bring the project in compliance with said act are promptly taken.
- c The Contractor shall be responsible for defending any legal actions instituted pursuant to NCGS 113A-64 against any party or persons described in this article.
- d To the fullest extent permitted by law, The Contractor shall indemnify and hold harmless the owner, consultants and employees of the owner, from and against all claims, damages, civil penalties, losses and expenses, including, but not limited to, attorney's fees, arising out of or resulting from the performance of work or failure of performance of work, provided that any such claim, damage, civil penalty, loss or expense is attributable to a violation of the Sedimentation Pollution Control Act. Such obligation shall not be construed to negate, abridge or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any part or persons described in this article.

ARTICLE 6 - INSPECTION OF THE WORK

- a It is a condition of this contract that the work shall be subject to inspection during normal working hours by the owner, designated official representatives of the owner, and those persons required by state law to test special work for official approval. The Contractor shall therefore provide safe access to the work at all times for such inspections.
- b All instructions to the Contractor will be made only by or through the owner or his designated project representative. Observations made by official representatives of the owner shall be conveyed to the owner for review and coordination prior to issuance to the Contractor.

- c Where special inspection or testing is required by virtue of any state laws, instructions of the owner, specifications or codes, the Contractor shall give adequate notice to the owner of the time set for such inspection or test, if the inspection or test will be conducted by a party other than the owner. Such special tests or inspections will be made in the presence of the owner, or his authorized representative, and it shall be the Contractor's responsibility to serve ample notice of such tests, not less than a forty-eight (48) hour minimum.
- d All laboratory tests shall be paid by the Contractor unless provided otherwise in the contract documents. The general contractor shall pay for laboratory tests to establish design mix for concrete, and for additional tests to prove compliance with contract documents where materials have tested deficient except when the testing laboratory did not follow the appropriate ASTM testing procedures.
- e Should any work be covered up or concealed prior to inspection and approval by the owner, such work shall be uncovered or exposed for inspection, if so requested by the owner in writing. Inspection of the work will be made promptly upon notice from the Contractor. All cost involved in uncovering, repairing, replacing, recovering and restoring to design condition, the work that has been covered or concealed will be paid by the Contractor involved.
- f If any other portion of the work has been covered which the owner has not specifically requested to observe prior to being covered, the owner may request to see such work and it shall be uncovered by the Contractor. If such work is found in accordance with the contract documents, the cost of uncovering and replacement shall, by appropriate change order, be charged to the owner. If such work is found not in accordance with the contract documents, the Contractor shall pay such costs unless it be found that this condition was caused by the owner or a separate contractor, in which event the owner or the separate contractor shall be responsible for the payment of such costs.

ARTICLE 7 - CONSTRUCTION SUPERVISION

- a Throughout the progress of the work, the Contractor shall keep on the job a competent superintendent or supervisory staff satisfactory to the owner. The superintendent shall not be changed without the consent of the owner unless said superintendent ceases to be employed by the Contractor or ceases to be competent. The superintendent shall have authority to act on behalf of the Contractor, and instructions, directions or notices given to him shall be as binding as if given to the Contractor. However, important directions, instructions and notices will be confirmed in writing to the Contractor as will all such items if requested by the Contractor.
- b The Contractor shall examine and study the drawings and specifications and fully understand the project design, and shall provide constant and efficient supervision to the work. Should he discover any discrepancies of any sort in the drawings or specifications, he shall report them to the owner without delay. He will not be held responsible for discrepancies in the drawings and/or specifications, but shall be held responsible to report them should they become known to him.

ARTICLE 8 - SUBCONTRACTS AND SUBCONTRACTORS

- a Within five (5) days after award of the contract, the Contractor shall submit to the owner a list giving the names and addresses of subcontractors and equipment and material suppliers he proposes to use, together with the scope of their respective parts of the work.
- b The owner will furnish to any subcontractor, upon request, evidence regarding amounts of money paid to the Contractor on account of the subcontractor's work.
- c The Contractor is and remains fully responsible for his own acts or omissions as well as those of any subcontractor or of any employee of either. The Contractor agrees that no contractual

relationship exists between the subcontractor and the owner in regard to the contract, and that the subcontractor acts on this work as an agent or employee of the Contractor.

- d The owner reserves the right to limit the amount of portions of work to be subcontracted as hereinafter specified.

ARTICLE 9 - CONTRACTOR AND SUBCONTRACTOR RELATIONSHIPS

The Contractor agrees that the term of these contract documents shall apply equally to each subcontractor as to the Contractor, and the Contractor agrees to take such action as may be necessary to bind each subcontractor to these terms. The Contractor further agrees to conform to the Code of Ethical Conduct as adopted by the Associated General Contractors of America, Inc., with respect to the Contractor-subcontractor relationships, and that payments to subcontractors shall be made in accordance with the provisions of NCGS 143-134.1 titled *Interest on final payments due to the general contractor: payments to subcontractors*.

- a On all public construction contracts which are let by the Town of Kitty Hawk the balance due the Contractor shall be paid in full within thirty (30) days after respective contracts of the project have been accepted by the owner, certified by the architect, or engineer to be completed in accordance with terms of the plans and specifications, or occupied by the owner and used for the purpose for which the project was constructed, whichever occurs first. Provided, however, that whenever the architect or consulting engineer in charge of the project determines that delay in completion of the project in accordance with terms of the plans and specifications is the fault of the Contractor, the project may be occupied and used for the purposes for which it was constructed without payment of any interest on amounts withheld past the thirty (30)-day limit. No payment shall be delayed because of the failure of another contractor on such project to complete his contract. Should final payment to the Contractor beyond the date of such contracts have been certified to be completed and accepted by the owner, or occupied by the owner and used for the purposes for which the project was constructed, be delayed by more than sixty (60) days, said contractor shall be paid interest, beginning on the 61st day, at the rate of one percent (1%) per month or fraction thereof unless a lower rate is agreed upon on such unpaid balance as may be due. In addition to the above final payment provisions, periodic payments due a contractor during construction shall be paid in accordance with the payment provisions of the contract documents or said contractor shall be paid interest on any such unpaid amount at the rate stipulated above for delayed final payments. Such interest shall begin on the date the payment is due and continue until the date on which payment is made. Such due date may be established by the terms of the contract. Funds for payment of such interest on county-owned projects shall be obtained from the current budget of the owning department, institution or agency. Where a conditional acceptance of a contract exists, and where the owner is retaining a reasonable sum pending correction of such conditions, interest on such reasonable sum shall not apply.
- b Within seven days of receipt of each periodic or final payment, the Contractor shall pay the subcontractor based on work completed or service provided under the subcontract. Should any periodic or final payment to the subcontractor be delayed by more than seven days after receipt of periodic or final payment by the Contractor, the Contractor shall pay the subcontractor interest, beginning on the eighth day, at the rate of one percent (1%) per month or fraction thereof on such unpaid balance as may be due.
- c The percentage of retainage on payments made by the Contractor to the subcontractor shall not exceed the percentage of retainage on payments made by the owner to the Contractor. Any percentage of retainage on payments made by the Contractor to the subcontractor that exceeds the percentage of retainage on payments made by the owner to the Contractor shall be subject to interest to be paid by the Contractor to the subcontractor at the rate of one percent (1%) per month or fraction thereof.

- d Nothing in this section shall prevent the Contractor at the time of application and certification to the owner from withholding application and certification to the owner for payment to the subcontractor for unsatisfactory job progress; defective construction not remedied; disputed work; third-party claims filed or reasonable evidence that claim will be filed; failure of subcontractor to make timely payments for labor, equipment and materials; damage to contractor or another subcontractor; reasonable evidence that subcontract cannot be completed for the unpaid balance of the subcontract sum; or a reasonable amount for retainage not to exceed the initial percentage retained by owner.

ARTICLE 10 - CHANGES IN THE WORK

- a The owner may have changes made in the work covered by the contract. These changes will not invalidate and will not relieve or release the Contractor from any guarantee given by him pertinent to the contract provisions. These changes will not affect the validity of the guarantee bond and will not relieve the surety or sureties of said bond. All extra work shall be executed under conditions of the original contract.
- b Except in an emergency endangering life or property, **NO CHANGE SHALL BE MADE BY THE CONTRACTOR EXCEPT UPON WRITTEN ORDER FROM THE OWNER AUTHORIZING SUCH CHANGE, AND NO CLAIM FOR ADJUSTMENTS OF THE CONTRACT PRICE SHALL BE VALID UNLESS THIS PROCEDURE IS FOLLOWED.**
- c In determining the values of changes, either additive or deductive, contractors are restricted to the use of the following methods:
 - 1 Where the extra work involved is covered by unit prices quoted in the proposal, the value of the change shall be computed by application of unit prices based on quantities, estimated or actual as agreed of the items involved.
 - 2 Where there is work to be deleted or withdrawn from the contract, the contracting parties shall negotiate and agree upon the equitable value of the change prior to issuance of the change order, and the change order shall stipulate the corresponding lump sum adjustment to the contract price.
- d In the event of emergency endangering life or property, the Contractor may be directed to proceed on a time and material basis whereupon the Contractor shall proceed and keep accurately on such form as may be required, a correct account of costs together with all proper invoices, payrolls and supporting data. Upon completion of the work the change order will be prepared as outlined under either Method "c(1)" or Method "c(2)" or both.
- e Under methods (c)1, no additional allowances shall be made for overhead and profit. Under methods (c)2 in paragraph (c) above the allowances for overhead and profits combined shall include no more than 10% profit.
- f The term "net cost" as used herein shall mean the difference between all proper cost additions and deductions. The "cost" as used herein may include all items of material and labor, rental value of power tools and equipment, and such items of cost as worker's compensation insurance, unemployment insurance, special insurance, Social Security and old age benefit, fringe benefits, bond adjustments and sales tax. Overtime and extra pay for holidays and weekends may be cost item only to the extent approved by the owner.
- g The following items shall be considered as overhead: insurance other than mentioned above, supervision, superintendents, timekeepers, clerks, expeditors, watchmen, small tools, incidental job burdens and general office expense and all other items not included in "cost" as above defined.

- h Should concealed conditions be encountered in the performance of the work below grade, or should concealed or unknown conditions in an existing structure be at variance with the conditions indicated by the contract documents, the contract sum and time for completion may be equitably adjusted by change order upon claim by either party made within thirty (30) days after the condition has been identified. The cost of such change shall be arrived at by one of the foregoing methods.

ALL CHANGE ORDERS SHALL BE SUPPORTED BY A BREAKDOWN SHOWING METHOD OF ARRIVING AT NET COST AS DEFINED ABOVE.

- i In all change orders, normal procedure will be for the owner to obtain quotations and supporting data, and verify correctness. The owner shall prepare the change order, secure the Contractor's signature, certify the change order by his signature, and forward the change order and all supporting data to the owner for the owner's signature. The change order shall be authorized by the Town of Kitty Hawk as final approval. In case of emergency or extenuating circumstances, approval of changes may be obtained verbally by telephone or field orders approved by all parties, then shall be substantiated in writing as outlined under normal procedure.

- j At the time of signing a change order, the Contractor shall be required to certify as follows:

"I certify that my bonding company will be notified forthwith that my contract has been changed by the amount of this change order, and that a copy of the approved change order will be mailed upon receipt by me to my surety."

- k A change order, when issued, shall be full compensation, or credit, for the extra work included, omitted or substituted. It shall show on its face the adjustment in time for completion of the project as a result of the change in the work.

ARTICLE 11 - CLAIMS FOR EXTRA COST

- a Should the Contractor consider that as a result of any instructions given in any form by the owner, he is entitled to extra cost above that stated in the contract, he shall give written notice thereof to the owner within seven (7) days without delay, and shall not proceed with the work affected, until further advised, except in emergency involving the safety of life or property, which condition is covered in Article 10(d) and Article 4(h). No claims for extra compensation will be considered unless the claim is so made. The owner shall render a written decision within seven (7) days of receipt of claim.

- b **THE CONTRACTOR SHALL NOT ACT ON INSTRUCTIONS RECEIVED BY HIM FROM PERSONS OTHER THAN THE OWNER, AND ANY CLAIMS FOR EXTRA COMPENSATION OR EXTENSION OF TIME ON ACCOUNT OF SUCH INSTRUCTION WILL NOT BE HONORED.** The owner will not be responsible for misunderstandings claimed by the Contractor of verbal instructions which have not been confirmed in writing, and in no case shall instructions be interpreted as permitting a departure from the contract documents unless such instruction is confirmed in writing and supported by a properly authorized change order. For purposes of this section, the Town of Kitty Hawk, owner, appoints the Town Manager to be its spokesperson.

ARTICLE 12 - UNCORRECTED FAULTY WORK

Should the correction of faulty or damaged work be considered inadvisable or inexpedient by the owner and the owner shall be reimbursed by the Contractor. A change order will be issued to reflect a reduction in the contract sum.

ARTICLE 13 - TIME OF COMPLETION, DELAYS, EXTENSION OF TIME

- a The time to be allowed for construction is stated in the Project Completion Schedule, which is a part of the Instructions to Bidders and therefore a part of the Bid Documents.

- b The Contractors shall commence work to be performed under this agreement on a date to be specified in a written order from the owner and shall fully complete all work hereunder with the number of consecutive calendar days stated.
- c If the Contractor is delayed at any time in the progress of his work by any act or negligence of the owner, or by any employee of either; by any separate contractor employee by the owner; by changes ordered in the work by labor disputes at the project site; by abnormal weather conditions not reasonably anticipated for the locality where the work is performed; by unavoidable casualties; by any causes beyond the Contractor's control; or by any other causes which the owner determine may justify the delay, then the contract time may be extended by change order for the time which the owner may determine is reasonable. Time extensions will not be granted for rain, wind, snow or other natural phenomena of **normal intensity**.

ARTICLE 14 - FINAL INSPECTION AND ACCEPTANCE

- a The owner shall determine when the work is completed and ready for final inspection and shall schedule a final inspection at a time and date acceptable to the owner, and contractor(s).
- b At the final inspection, the owner shall, if job conditions warrant, record a list of items that are found to be incomplete or not in accordance with the contract documents. At the conclusion of the final inspection, the owner shall make the following determinations, in writing:
 - 1 That the project is completed and accepted, and if so, that date shall be recorded and shall become the date of acceptance as described below.
 - 2 That the project is accepted subject to the list of discrepancies (punch list). All punch list items must be completed within seven (7) days of acceptance.
 - 3 That the project is not complete and another date for a final inspection will be established.
- c The date of acceptance will establish the following:
 - 1 The beginning of guarantees and warranties period.
 - 2 The date on which the Contractor's insurance coverage for public liability, property damage and builder's risk may be terminated.
 - 3 The termination date of utility cost to the Contractor.

ARTICLE 15 - CORRECTION OF WORK BEFORE FINAL PAYMENT

- a Any work, materials, fabricated items or other parts of the work which have been condemned or declared not in accordance with the contract by the owner shall be promptly removed from the work site by the Contractor, and shall be immediately replaced by new work in accordance with the contract at no additional cost to the owner. Work or property of other contractors or the owner, damaged or destroyed by virtue of such faulty work, shall be made good at the expense of the Contractor whose work is faulty.
- b Correction of condemned work described above shall commence within twenty-four (24) hours after receipt of notice from the owner, and shall make satisfactory progress until completed.
- c Should the Contractor fail to proceed with the required corrections, then the owner may complete the work in accordance with the provisions of Article 17.

ARTICLE 16 - CORRECTION OF WORK AFTER FINAL PAYMENT

See Article 24, Performance Bond and Payment Bond, and Article 30, Guarantee. Neither the final certificate, final payment, occupancy of the premises by the owner, nor any provision of the contract, nor any other act or instrument of the owner, nor the owner, shall relieve the Contractor from responsibility for negligence, or faulty material or workmanship, or failure to comply with the drawings and specifications. He shall correct or make good any defects due thereto and repair any damage resulting therefrom which may appear during the guarantee period following final acceptance of the work except as stated otherwise under Article 30, Guarantee. The owner will report any defects as they may appear to the Contractor and establish a time limit for completion of corrections by the Contractor. The owner will be the judge as to the responsibility for correction of defects.

ARTICLE 17 - OWNER'S RIGHT TO DO WORK

If, during the progress of the work or during the period of guarantee, the Contractor fails to prosecute the work properly or to perform any provision of the contract, the owner, after fifteen (15) days' written notice sent by certified mail, return receipt requested, to the Contractor from the owner, may perform or have performed that portion of the work. The cost of the work may be deducted from any amounts due or to become due to the Contractor, such action and cost of same having been first approved by the owner. Should the cost of such action of the owner exceed the amount due or to become due The Contractor, then the Contractor or his surety, or both, shall be liable for and shall pay to the owner the amount of said excess.

ARTICLE 18 - ANNULMENT OF CONTRACT

If the Contractor fails to begin the work under the contract within the time specified, or fails to perform the work with sufficient workmen and equipment or with sufficient materials to ensure the prompt completion of said work, or shall perform the work unsuitable or shall discontinue the prosecution of the work, or if the Contractor shall become insolvent or be declared bankrupt or commit any act of bankruptcy or insolvency, or allow any final judgment to stand against him unsatisfied for a period of forty-eight (48) hours, or shall make an assignment for the benefit of creditors, or for any other cause whatsoever shall not carry on the work in an acceptable manner, the owner shall give notice in writing to the Contractor and his surety of such delay, neglect or default, specifying the same, and if the Contractor within a period of fifteen (15) days after such notice shall not proceed in accordance therewith, then the owner shall, upon written certificate from the owner of the fact of such delay, neglect or default, and the Contractor's failure to comply with such notice, have full power and authority, without violating the contract, to take the prosecution of the work out of the hands of said contractor, to appropriate or use any or all contract materials and equipment on the grounds as may be suitable and acceptable and may enter into an agreement for the completion of said contract according to the terms and provisions thereof or use such other methods as in his opinion shall be required for the completion of said contract in an acceptable manner. All costs and charges incurred by the owner, together with the costs of completing the work under contract, shall be deducted from any monies due or which may become due said contractor. In case the expense so incurred by the owner shall be less than the sum which would have been payable under the contract, if it had been completed by said contractor, then the said contractor shall be entitled to receive the difference, but in case such expense shall exceed the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay to the owner the amount of said excess.

ARTICLE 19 - OWNER'S AND CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE THE CONTRACT

- a Should the work be stopped by order of a court having jurisdiction, or by order of any other public authority for a period of three months, due to cause beyond the fault or control of the Contractor or the owner, and written notice of the same be sent by certified mail, return receipt requested, the parties may suspend operations on the work or terminate the contract. If the owner should fail or refuse to make payment on account of a certificate issued by the Town within thirty (30) days after receipt of same, then the Contractor, after fifteen (15) days written notice sent by certified mail,

return receipt requested, to the owner and the owner, may suspend operations on the work or terminate the contract.

- b The owner shall be liable to the Contractor for the cost of all materials delivered and work performed on this contract plus 20 percent overhead and profit and shall make such payment until the above described notice is received by either party, plus 20 percent overhead. The owner shall be the judge as to the correctness of such payment.

ARTICLE 20 - REQUEST FOR PAYMENT

- a Not later than the fifth day of the month, the Contractor shall submit to the owner a request for payment for work done during the previous month. The request shall be in the form agreed upon between the Contractor and the owner, but shall show substantially the value of work done and materials delivered to the site during the period since the last payment, and shall sum up the financial status of the contract with the following information:
 - 1 Total of contract including change orders.
 - 2 Value of work completed to date.
 - 3 Less five percent (5%) retainage, provided however, that after fifty percent (50%) of the contractor's work has been satisfactorily completed on schedule, with approval of the owner, further requirements for retainage will be waived only so long as work continues to be completed satisfactorily and on schedule.
 - 4 Less previous payments.
 - 5 Current amount due.
- b The Contractor, upon request shall substantiate the request with invoices of vouchers or payrolls or other evidence.
- c Prior to submitting the first request, the Contractor shall prepare for the owner a schedule showing a breakdown of the contract price into values of the various parts of the work, so arranged as to facilitate payments to subcontractors in accordance with Article 9, Contractor and Subcontractor Relationships.
- d Request for extension of time shall be made in writing within twenty (20) days following cause of delay. In case of continuing cause for delay, only one claim is necessary.
- e The Contractor shall notify his surety in writing of extension of time granted.

ARTICLE 21 - CERTIFICATE OF PAYMENT AND FINAL PAYMENT

- a Within five (5) days from receipt of request for payment from the Contractor, the Engineer shall issue and forward to the owner a certificate for payment. This certificate shall indicate the amount requested or as approved by the owner. If the certificate is not approved by the owner, it shall so be stated in writing to the Contractor the reasons for withholding payment.
- b No certificate issued or payment made shall constitute an acceptance of the work or any part thereof. The making and acceptance of final payment shall constitute a waiver of all claims by the owner except:
 - 1 Claims arising from unsettled liens or claims against the Contractor.
 - 2 Faulty work or materials appearing after final payment.

- 3 Failure of the Contractor to perform the work in accordance with drawings and specifications, such failure appearing after payment.
- c The making and acceptance of final payment shall constitute a waiver of all claims by the Contractor except those claims previously made and remaining unsettled.
- d The Town of Kitty Hawk will not authorize final payment until the work under contract has been certified by engineer.
- e Final certificate of payment shall be accompanied by the following:
 - 1 Warranties and guarantees required by the contract.
 - 2 Affidavit of contractors of payment to material suppliers and subcontractors.
 - 3 Certificate of compliance by Engineer.
 - 4 Consent of surety to final payment. (NOT REQUIRED FOR THIS PROJECT)

ARTICLE 22 - PAYMENTS WITHHELD

- a The owner may withhold payment for the following reasons:
 - 1 Faulty work not corrected.
 - 2 The unpaid balance on the contract is insufficient to complete the work in the judgment of the owner.
- b The owner may authorize the withholding of payment for the following reasons:
 - 1 Claims filed against the Contractor or evidence that a claim will be filed.
 - 2 Evidence that subcontractors have not been paid.
- c When grounds for withholding payments have been removed, payment will be released. Delay of payment due the Contractor without cause will make owner liable for payment of interest to the Contractor as provided in G.S. 143-134.1.

ARTICLE 23 - MINIMUM INSURANCE REQUIREMENTS

The work under this contract shall not commence until the Contractor has obtained all required insurance and verifying certificates of insurance have been approved in writing by the owner. These certificates shall contain a provision that coverages afforded under the policies will not be cancelled, reduced in amount or coverages eliminated until at least thirty (30) days after mailing written notice, by certified mail, return receipt requested, to the insured and the owner of such alteration or cancellation.

- a **Worker's Compensation and Employer's Liability**
 - 1 The Contractor shall provide and maintain, during the life of the contract, worker's compensation insurance, as required by law, as well as employer's liability coverage, with minimum limits of \$100,000.
- b **General Liability and Property Damage**

- 1 The Contractor shall provide and maintain, during the life of the contract comprehensive general liability insurance, including coverage for premises operations, independent contractors, completed operations, products and contractual exposures, as shall protect such contractors from claims arising out of any bodily injury, including accidental death, as well as from claims for property damages which may arise from operations under this contract, whether such operations be by the Contractor or by any subcontractor, or by anyone directly or indirectly employed by either of them and the minimum acceptable limits of such insurance shall be \$1,000,000.
- 2 Such coverage for completed operations must be maintained for the life of the work performed under the contract.

c Property Insurance

- 1 The Contractor shall purchase and maintain property insurance during the life of this contract, upon the entire work at the site to the full insurable value thereof. This insurance shall include the interests of the owner, the Contractor, and subcontractors in the work and shall insure against the perils of fire, extended coverage, and vandalism and malicious mischief. If the owner is damaged by failure of the Contractor to purchase or maintain such insurance, then the Contractor shall bear all reasonable costs properly attributable thereto; the Contractor shall effect and maintain similar property insurance on portions of the work stored off the site when request for payment per articles so includes such portions.

d Deductible

- 1 Any deductible, if applicable to loss covered by insurance provided, is to be borne by the Contractor.

e Other Insurance

- 1 The Contractor shall obtain such additional insurance as may be required by the owner or by the General Statutes of North Carolina including motor vehicle insurance, in amounts not less than the statutory limits.

f Proof of Carriage

- 1 The Contractor shall furnish the owner with satisfactory proof of carriage of the insurance required before written approval is granted by the owner.

ARTICLE 24 - PERFORMANCE BOND AND PAYMENT BOND (Bonds are Not Required for this Project)

- a The Contractor shall furnish a performance bond and payment bond executed by a surety company authorized to do business in North Carolina. The bonds shall be in the full contract amount. Bonds shall be bound with these specifications.
- b All bonds shall be countersigned by an authorized agent of the bonding company who is licensed to do business in North Carolina.

ARTICLE 25 - CONTRACTOR'S AFFIDAVIT

The final payment of retained amount due the Contractor on account of the contract shall not become due until the Contractor has furnished to the owner an affidavit signed, sworn and notarized to the effect that all payments for materials, services or subcontracted work in connection with his contract have been satisfied, and that no claims or liens exist against the Contractor in connection with this contract. In the event that the Contractor cannot obtain similar affidavits from subcontractors to protect the Contractor

and the owner from possible liens or claims against the subcontractor, the Contractor shall state in his affidavit that no claims or liens exist against any subcontractor to the best of his (the Contractor's) knowledge, and if any appear afterward, the Contractor shall indemnify the owner from said claims or liens.

ARTICLE 26 - ASSIGNMENTS

The Contractor shall not assign any portion of this contract nor subcontract in its entirety. Except as may be required under terms of the performance bond or payment bond, no funds or sums of money due or become due the Contractor under the contract may be assigned.

ARTICLE 27 - USE OF PREMISES

- a The Contractor shall confine his apparatus; the storage of materials and the operations of his workmen to limits indicated by law, ordinances, permits or directions of the designer and shall not exceed those established limits in his operations.
- b The Contractor shall not load or permit any part of the project to be loaded with a weight that will endanger its safety.
- c The Contractor shall enforce the owner's instructions regarding signs, advertisements, fires and smoking.

ARTICLE 28 - UTILITIES, STRUCTURES, SIGNS

- a The Contractor shall provide toilet facilities and adequate sanitary arrangements on site. These facilities will be available to all subcontractors on the job and shall be kept in a neat and sanitary condition at all times. Chemical toilets are acceptable.
- b The Contractor will erect one sign on the project if required. (NOT REQUIRED FOR THIS PROJECT) The sign shall be of sound construction, and shall be neatly lettered with black letters on white background. The sign shall bear the name of the project, and the names of contractors on the project, and the name of the owner and consultants. Directional signs may be erected on the owner's property subject to approval of the owner with respect to size, style and location of such directional signs. Such signs may bear the name of the Contractor and a directional symbol. No other signs will be permitted except by permission of the owner.

ARTICLE 29 - CLEANING UP

The Contractors shall keep the project and surrounding area reasonably free from rubbish at all times, and shall remove debris from the site from time to time or when directed to do so by the owner.

ARTICLE 30 - GUARANTEE

The Contractor(s) shall guarantee the materials and workmanship against defect due to faulty materials or faulty workmanship or negligence for a period of twelve (12) months following the final acceptance of the work. Where items of equipment or material carry a manufacturer's warranty for any period in excess of twelve (12) months, then the manufacturer's warranty shall apply for that particular piece of equipment or material. The Contractor shall replace such defective materials, equipment or workmanship without cost to the owner within the stipulated guarantee period.

ARTICLE 31 - CODES AND STANDARDS

Wherever reference is given to codes, standard specifications or other data published by regulating agencies including but not limited to, national electrical codes, North Carolina state building codes, federal specifications, ASTM specifications, various institute specifications, etc., it shall be understood that such reference is to the latest edition including addenda published prior to the date of the contract documents.

ARTICLE 32 - INDEMNIFICATION

To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the owner, the agents, consultants and employees of the owner from and against all claims, damages, losses and expenses, including, but not limited to, attorney's fees, arising out of or resulting from the performance or failure of performance of the work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom, and (2) is caused in whole or in part by any negligent act or omission of the Contractor, the Contractor's subcontractor, or the agents of either the Contractor or the Contractor's subcontractor. Such obligation shall not be construed to negate, abridge or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this article.

ARTICLE 33 - EQUAL OPPORTUNITY CLAUSE

The non-discrimination clause contained in Section 202 (Federal) Executive Order 11246, as amended by Executive Order 11375, relative to equal employment opportunity for all persons without regard to race, color, religion, sex or national origin, and the implementing rules and regulations prescribed by the secretary of Labor, are incorporated herein.

ARTICLE 34 - EMPLOYMENT OF THE HANDICAPPED

The Contractor agrees not to discriminate against any employee or applicant for employment because of physical or mental handicap in regard to any position for which the employee or applicant is qualified. The Contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified handicapped individuals without discrimination based upon their physical or mental handicap in all employment practices.

ARTICLE 35 - MINORITY BID PARTICIPATION

The Town of Kitty Hawk, in accordance with its goals adopted for participation by minority businesses, encourages minority businesses to submit bids for this construction project. The Town of Kitty Hawk shall award public contracts without regard to race, religion, color, creed, national origin, sex, age or handicapping condition as defined by North Carolina General Statutes 168A-3. All contractors submitting bids for this project shall verify to the Town of Kitty Hawk that such contractor does not discriminate in the employment of any subcontractors nor does it discriminate in the purchase of materials or equipment for reason of race, religion, color, creed, national origin, sex, age or handicapping condition as defined by North Carolina General Statutes 168A-3. Each contractor submitting a bid for such project shall further verify that they have directly solicited and encouraged participation by minority subcontractors and minority businesses and in the event of solicitation of bids by subcontractors, has directly solicited and encouraged participation in the bidding process by minority businesses.

ARTICLE 36 - E-VERIFY

This contract is subject to the E-Verify requirements of NCGS 153A-449 and NCGS 64-26. This contract shall not be valid until contractor has properly executed and provided to the Town the Affidavit of E-Verify Compliance for Employers with Less Than 25 Employees in North Carolina or the Affidavit of E-Verify Compliance for Employers with 25 or More Employees in North Carolina, whichever is applicable. The parties acknowledge and agree that such affidavit is a material part of this contract and contractor shall indemnify and hold harmless the Town from any loss or liability for failure to comply with the E-Verify requirements.

SECTION 01010 – SUMMARY OF WORK

PART 1 - GENERAL1.1 DESCRIPTION:

A. Summary:

1. The project consists of the construction of a six foot wide boardwalk and on grade crushed granite trails through the wooded wetland areas to connect Kitty Hawk Park with the Coastal Reserve Trail. The base bid will include the construction of approximately 330 linear feet of six foot wide elevated wooden walkway and the construction of approximately 210 linear feet of six foot wide crushed granite trail on grade. This project will be bid on a unit price format and final lengths of the two trail types will determine final project costs.
2. Unit bid items will include a per linear foot cost for additional six foot wide walkway; six foot wide granite trail, and other items as listed in the Form of Proposal

B. Related Documents:

1. Contract Documents, including Drawings and Specifications, for this Project were prepared by Albemarle & Associates, Ltd.

1.2 AWARD OF CONTRACT:

A. Scope:

1. The Work described in these Specifications and Drawings is to be awarded in whole to a single General Contractor. The Contractor receiving the award shall furnish all material, equipment, temporary facilities and services required to construct the following generally described Project and all appurtenant construction thereto, as shown on the Drawings and as specified herein.

1.3 ITEMS OF WORK:

A. General:

1.4 QUANTITIES:

- A. General: The plan illustrates 330 linear feet of six foot wide elevated wooden boardwalk and approximately 210 linear feet of crushed granite pathway. Silt fencing and seeding/stabilization is assumed and allowances have been included in the Form of Proposal

1.5 CONTRACTOR USE OF PREMISES:

A. General:

1. During the construction period the Contractor shall have full use of the premises for construction operations, including use of the site. The Contractor's use of the premises is limited only by the Owner's right to perform construction operations with its own forces or to employ separate contractors on portions of the Project.
- B. Additional land for construction:
1. Contractor shall provide any additional lands required for the completion of this Project, storage of materials and equipment. Contractor shall secure access to same.
- C. Availability of land:
1. The Contractor shall not, without written consent, enter upon or occupy any property, other than the Owner's land, public streets, roadways and rights-of-way furnished by the Town or County. The Contractor shall not cause any interference with or hindrance to any individual in the pursuance of their normal Work.
- D. Protection of property:
1. The Contractor, at his own risk and expense, shall shore up and otherwise protect buildings, highways, bridges, fences, walls and any other existing structures along the line or adjacent to the Work. In the event that any injury results to any private or public property or to any structure or thing whatsoever, the Contractor shall, at his own cost and expense, make all such repairs as may be necessary, and shall indemnify and save harmless the Owner from and against all suits, actions, claims, demands and liabilities which may arise.
- E. Cleanup:
1. During the progress of the Work, the Contractor shall keep the premises and vicinity of the Work free from unsightly and disorderly piles of debris and materials resulting from or due to the construction of the Work. Suitable locations shall be allotted for various materials and for debris. Materials shall be kept in their storage locations except as needed in the Work, and debris shall be properly and regularly collected and deposited in its allocated location, the intent being to avoid unnecessary unsightly and disorderly appearance and confusion and to promote an orderly and efficient conduct of the Work.
 2. Upon completion of each element of the Work, the Contractor for that section shall shape up the ground adjacent thereto, removing all surplus excavated material and leaving the area free from hump and hollow.

1.6 OWNER OCCUPANCY:

- A. Full-Owner Occupancy:
1. The Owner will occupy the site during the entire construction period. Cooperate with the Owner during construction operations to minimize conflicts and

facilitate Owner usage. Perform the Work so as not to interfere with the Owner's operations.

1.7 OWNER-FURNISHED ITEMS:

A. Access to Property:

1. The Owner shall provide those properties and/or easements for the construction which are shown on the Drawings and in these Specifications.

B. Permits

1. None

1.8 ENGINEER-FURNISHED ITEMS:

A. The Engineer shall supply the following:

1. Drawings and Specifications. The Engineer will provide the Contractor with three sets of field Drawings and Specifications after the execution of the contract. If additional Drawings and Specifications are required, the Contractor shall compensate the Engineer for the same. The Engineer will provide the Contractor with such revised Drawings and Specifications as may be required to show any authorized changes or extra Work. These Drawings and Specifications are the property of Albemarle Engineering Incorporated and are furnished to the Owner and the Contractor for the construction of the Project under this contract only. The data given in the Specifications and shown on the Drawings are believed to be accurate, but the accuracy is not guaranteed. The Contractor must take all levels, locations measurements and verify all dimensions for the job site prior to construction and adapt his Work to the exact construction. Scale measurements taken from the prints are not considered for more than reference; the larger scale Drawings take precedence over all scales. Shop Drawings take precedence over all others.

PART 2 – PRODUCTS

NIL

PART 3 – EXECUTION

3.1 MISCELLANEOUS PROVISIONS:

A. Regulatory Requirements

1. General: It is intended herein that all Work to be performed under this contract be in compliance with the latest editions of all applicable Federal, State and local codes, laws and regulations governing standards of design, construction workmanship, materials, types of equipment and methods of installation in the County of Dare, North Carolina. If the Contractor performs any Work knowing

it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Engineer, he shall bear all cost arising therefrom.

2. Registration: All contractors and subcontractors performing Work under this contract shall conform to all requirements of the State of North Carolina regarding registration.

B. Safety

1. Each contractor along shall be solely and completely responsible for conditions of the job site in connection with his Work, including safety of all persons and property, preparatory to and during performance of the Work. This requirement shall apply continuously and not be limited to normal working hours.
2. The duty of the Engineer to conduct construction review of the Contractor's performance is not intended to include review of the adequacy of the Contractor's safety measure in or near the construction site.

C. Accidents:

1. The Contractor shall provide, at the site, such equipment and medical facilities as necessary to supply first-aid service to anyone who may be injured. The Contractor must promptly report in writing to the Owner all accidents whatsoever arising out of, or in connection with the performance of the Work whether on, or adjacent to, the site and which caused death, personal injury, or property damages, giving full details and statements of witnesses. In addition, if death or serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger to both the Engineer and the Owner. If any claim is made by anyone against the Contractor or any subcontractor on account of any accident, the Contractor shall promptly report the facts, in writing, to the Owner, giving full details of the claim.

END OF SECTION

SECTION 01040 PROJECT COORDINATION

PART 1 - GENERAL1.1 DESCRIPTION:

A. Summary:

1. This Section specifies administrative and supervisory requirements necessary for Project coordination including, but not necessarily limited to:
 - a. Coordination.
 - b. Administrative and supervisory personnel.
 - c. General installation provisions.
 - d. Cleaning and protection.
 - e. *Division 1 Project Meetings*

B. Coordination:

1. Coordinate construction activities included under various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections of the Specifications that are dependent upon each other for proper installation, connection and operation.
2. Where installation of one part of the Work is dependent on installation of other components, either before or after its own installation, schedule construction activities in the sequence required to obtain the best results.
3. Where availability of space is limited, coordinate installation of different components to assure maximum accessibility for required maintenance, service and repair.
4. Make adequate provisions to accommodate items scheduled for later installation.
5. Where necessary, prepare memoranda for distribution to each party involved outlining special procedures required for coordination. Include such items as required notices, reports and attendance at meetings.
6. Prepare similar memoranda for the Owner and separate Contractors where coordination of their Work is required.

C. Administrative Procedures:

1. Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - a. Installation and removal of temporary facilities.
 - b. Delivery and processing of submittals.
 - c. Progress meetings.
 - d. Project close-out activities.

D. Conservation:

1. Coordinate construction activities to ensure that operations are carried out with consideration given conservation of energy, water and materials.
2. Salvage materials and equipment involved in performance of, but not actually incorporated in, the Work. Refer to other Sections for disposition of salvaged materials that are designated as Owner's property.

1.2 SUBMITTALS:

A. Coordination Drawings:

1. Prepare and submit coordination Drawings where close and careful coordination is required for installation of projects and materials fabricated off-site by separate entities and where limited space availability necessitates maximum utilization of space for efficient installation of different components.
2. Show the interrelationship of components shown on separate Shop Drawings.
3. Indicate required installation sequences.
4. *Division 1 Submittals*

PART 2 - PRODUCTS

2.1 MATERIALS:

A. Inspection:

1. Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.

PART 3 - EXECUTION

3.1 GENERAL INSTALLATION PROVISIONS:

A. Inspection of Conditions:

1. Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

B. Manufacturer's Instructions:

1. Comply with manufacturer's installation instructions and recommendations to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.

C. Performance:

1. Provide attachment and connection devices and methods necessary for securing Work. Secure Work true to line and level.
2. Recheck measurements and dimensions before starting each installation.
3. Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.
4. Coordinate temporary enclosures with required inspections and tests to minimize the necessity of uncovering completed construction for that purpose.

3.2 CLEANING AND PROTECTION:

- A. During handling and installation, clean and protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- B. Clean and maintain completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- C. Limiting Exposures:
 1. Supervise construction activities to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:
 - a. Excessive static or dynamic loading
 - b. Excessive internal or external pressures
 - c. Puncture
 - d. Abrasion
 - e. Heavy traffic
 - f. Soiling, staining and corrosion
 - g. Rodent and insect infestation
 - h. Combustion
 - i. Improper lubrication
 - j. Unusual wear or other misuse
 - k. Contact between incompatible materials
 - l. Destructive testing
 - m. Misalignment
 - n. Unprotected storage
 - o. Improper shipping or handling
 - p. Theft
 - q. Vandalism

END OF SECTION

SECTION 01090 DEFINITIONS & STANDARDS

PART 1 - GENERAL1.1 DESCRIPTION:

A. Summary:

1. This section specifies definitions and standards associated with the Work defined in these documents.

1.2 DEFINITIONS:

A. General:

1. Basic Contract definitions are included in the Standard General Conditions as written in Engineer's Joint Council Documents Committee typical contract documents.

B. Specific Terms:

1. Indicated: The term "indicated" refers to graphic representations, notes or schedules on the Drawings, or other Paragraphs or Schedules in Specifications, and similar requirements in Contract Documents. Where terms such as "shown", "noted", "scheduled" and "specified" are used, it is to help locate the reference; no limitation on locations is intended except as specifically noted.
2. Directed: Terms such as "directed", "requested", "authorized", "selected", "approved", "required" and "permitted" mean "directed by the Engineer", "requested by the Engineer" and similar phrases. However, no implied meaning shall be interpreted to extend the Engineer's responsibility into the Contractor's area of construction supervision.
3. Approve: The term "approved", where used in conjunction with the Engineer's action on the Contractor's submittals, applications and requests, is limited to the duties and responsibilities of the Engineer as stated in General and Supplementary Conditions. Such approval shall not release the Contractor from responsibility to fulfill Contract requirements unless otherwise proved in the Contract Documents.
4. Regulation: The term "Regulations" includes laws, ordinances, statutes and lawful orders issued by authorities having jurisdiction, as well as rules, conventions and agreements within the construction industry that control performance of the Work, whether lawfully imposed by authorities having jurisdiction or not.
5. Furnish: The term "furnish" is used to mean "supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation and similar operations."
6. Install: The term "install" is used to describe operations at Project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring,

- applying, working to dimension, finishing, curing, protection, cleaning and similar operations."
7. Provide: The term "provide" means "to furnish and install, complete and ready for the intended use."
 8. Installer: An "installer" is the Contractor or an entity engaged by the Contractor, either as an employee, or subcontractor for performance of a particular construction activity, including installation, erection, application and similar operations. Installers are required to be experienced in the operations they are engaged to perform.
 9. Project Site: Project Site is the space available to the Contractor for performance of construction activities, either exclusively or in conjunction with others performing other construction activities as part of the Project. The extent of the Project Site is shown on the Drawings and may or may not be identical with the description of the land upon which the Project is to be built.
 10. Testing Laboratories: A "testing laboratory" is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

1.3 INDUSTRY STANDARDS:

A. Applicability of Standards:

1. Except where the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents. Such standards are made a part of the Contract Documents by reference. Individual Sections indicate which codes and standards the Contractor must keep available at the Project Site for reference.

B. Publication Dates:

1. Where the date of issue of a referenced standard is not specified, comply with the standard in effect as of date of Contract Documents.

C. Updated Standards:

1. At the request of the Engineer, Contractor or authority having jurisdiction, submit a Change Order proposal where an applicable code or standard has been revised and reissued after the date of the Contract Documents and before performance of Work affected. The Engineer will decide whether to issue a Change Order to Proceed with the updated standard.

D. Conflicting Requirements:

1. Where compliance with two or more standards is specified, and they establish different or conflicting requirements for minimum quantities or quality levels, the most stringent requirement will be enforced, unless the Contract Documents indicate otherwise. Refer requirements that are different, but apparently equal,

and uncertainties as to which quality level is more stringent to the Engineer for a decision before proceeding.

E. Minimum Quantity or Quality Levels:

1. In every instance the quantity or quality level shown or specified shall be the minimum to be provided or performed. The actual installation may comply exactly, within specified tolerances, with the minimum quantity or quality specified, or it may exceed that minimum within reasonable limits. In complying with these requirements, indicated numeric values are minimum or maximum values, as noted, or appropriate for the context of the requirements. Refer instances of uncertainty to the Engineer for a decision before proceeding.

F. Copies of Standards:

1. Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to that entity's construction activity. Copies of applicable standards are not bound with the Contract Documents.
2. Where copies of standards are needed for performance of a required construction activity, the Contractor shall obtain copies directly from the publication source.

1.4 ABBREVIATIONS AND NAMES:

A. TRADE ASSOCIATIONS:

1. Trade association names and titles of general standards are frequently abbreviated. The following acronyms or abbreviations as referenced in Contract Documents are defined to mean the associated names. Names are subject to change and are believed to be, but are not assured to be, accurate and up to date as of date of Contract Documents.

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACPA	American Concrete Pipe Association
AI	Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
ANSI	American National Standards Institute
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWPA	American Wood Preservers' Association
AWS	American Welding Society
AWWA	American Water Works Association
CISPI	Cast Iron Soil Pipe Institute
NAPA	National Asphalt Pavement Association
NEC	National Electric Code (from NFPA)
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
N.F.P.A.	National Forest Products Association
SWPA	Submersible Wastewater Pump Association
UL	Underwriters Laboratories

B. Federal, State and Local Government Agencies:

1. Names and titles of Federal government standard or Specification producing agencies are frequently abbreviated. The following acronyms or abbreviations referenced in the Contract Documents indicate names of standard or specification producing agencies of the federal government.

EPA	Environmental Protection Agency
OSHA	Occupational Safety and Health Administration
NCDOT	North Carolina Department of Transportation
NC DEQ	North Carolina Division of Environmental Quality
USACOE	United States Army Corps of Engineers

PART 2 - PRODUCTS

NIL

PART 3 - EXECUTION

NIL

END OF SECTION

SECTION 01200 PROJECT MEETINGS

PART 1 - GENERAL1.1 DESCRIPTION:

A. Summary:

1. This Section specifies administrative and procedural requirements for Project meetings including but not limited to:
 - a. Pre-construction conference.
 - b. Coordination meetings.
 - c. Other meetings as called by Owner, Contractor or Engineer.

1.2 PRE-CONSTRUCTION CONFERENCE:

A. General:

1. Schedule a pre-construction conference and organizational meeting at the Project site or other convenient location prior to commencement of construction activities. Conduct the meeting to review responsibilities and personnel assignments.

B. Attendees:

1. The Owner, Engineer and their consultants, the Contractor and his superintendent, and any major subcontractors, manufacturers, suppliers and other concerned parties necessary shall each be represented at the conference by persons familiar with and authorized to conclude matters relating to the Work.

C. Agenda:

1. Discuss items of significance that could affect progress including such topics as:
 - a. Tentative construction schedule.
 - b. Critical work sequencing.
 - c. Designation of responsible personnel.
 - d. Procedures for processing field decisions and Change Orders.
 - e. Procedures for processing Applications for Payment.
 - f. Distribution of Contract Documents.
 - g. Submittal of Shop Drawings, Product Data and Samples.
 - h. Preparation of record documents.

- i. Use of the premises.
- j. Office, work and storage areas.
- k. Equipment deliveries and priorities.
- l. Safety procedures.

1.3 COORDINATION MEETINGS:

A. General:

- 1. Conduct Project coordination meetings at the request of the Owner, Engineer or contractor at a time convenient for all parties involved.
- 2. Request representation at each meeting by every party currently involved in coordination or planning for the construction activities involved. Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

PART 2 - PRODUCTS

NIL

PART 3 - EXECUTION

NIL

END OF SECTION

SECTION 01300 SUBMITTALS

PART 1 - GENERAL1.1 DESCRIPTION:

A. Summary:

1. This Section specifies administrative and procedural requirements for submittals required for performance of the Work, including:
 - a. Submittal procedures.
 - b. Contractor's construction schedule.
 - c. Product data.
 - d. Record documents.

PART 2 - PRODUCTS2.1 PRODUCT DATA:

A. General:

1. Collect Product Data into a single submittal for each element of construction or system. Where Product Data must be specially prepared because standard printed data is not suitable for use, submit as "Shop Drawings."
2. Each set of data shall include but not necessarily be limited to:
 - a. Drawings showing dimensions and treatment of all wood products.
 - b. Product data sheets for all sluice gates, sleeves and thimbles
 - c. Product data sheets for Moccasin Canal bulkhead or precast headwall.
 - d. Concrete mix design Western Canal and 30' Canal
 - e. Fasteners, bolts, tie rods and anchor bolts including adhesives
3. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products, some of which are not required, mark copies to indicate the applicable information. Include the following information:
 - a. Manufacturer's printed recommendations
 - b. Compliance with recognized trade association standards
 - c. Compliance with recognized testing agency standards

- d. Application of testing agency labels and seals
 - e. Notation of dimensions verified by field measurement
 - f. Notation of coordination requirements
- B. Submittals:
- 1. Submit 4 copies of each required submittal; submit 4 copies where required for maintenance manuals. The Engineer will retain one and return the others to Owner and Contractor marked with action taken and corrections or modifications required.
 - 2. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
- C. Distribution:
- 1. Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators and others required for performance of construction activities. Show distribution on transmittal forms.
 - 2. Do not proceed with installation until an applicable copy of Product Data applicable is in the installer's possession.
 - 3. Do not permit use of unmarked copies of Product Data in connection with construction.

PART 3 - EXECUTION

3.1 SUBMITTAL PROCEDURES:

- A. Coordination:
- 1. Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
 - 2. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.
 - 3. The Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- B. Processing:
- 1. Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for resubmits.
- C. Submittal Preparation:
- 1. Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.

2. Include the following information on the label for processing and recording action taken.
 - a. Project name
 - b. Date
 - c. Name and address of Engineer
 - d. Name and address of Contractor
 - e. Name and address of subcontractor
 - f. Name and address of supplier
 - g. Name of manufacturer
 - h. Number and title of appropriate Specification Section
 - i. Drawing number and detail references, as appropriate
- D. Submittal Transmittal:
1. Package each submittal appropriately for transmittal and handling.

3.2 CONTRACTOR'S CONSTRUCTION SCHEDULE:

- A. General:
1. A schedule is required for this Project.

3.3 ENGINEER'S ACTION:

- A. General:
1. Except for submittals for record, information or similar purposes, where action and return is required or requested, the Engineer will review each submittal, mark to indicate action taken and return promptly.
 2. Compliance with specified characteristics is the Contractor's responsibility.
- B. Action Stamp:
1. The Engineer will stamp each submittals with a uniform, self-explanatory action stamp. The stamp will be appropriately marked, as follows, to indicate the action taken:
 - a. Final Unrestricted Release: Where submittals are marked "Approved," that part of the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents; final acceptance will depend upon that compliance.

- b. Final-But-Restricted Release: When submittals are marked "Approved as Noted", that part of the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents; final acceptance will depend on that compliance.
 - c. Returned for Resubmittal: When submittal is marked "Not Approved, Revise and Resubmit", do not proceed with that part of the Work covered by the submittal, including purchasing, fabrication, delivery or other activity. Revise or prepare a new submittal in accordance with the notations; resubmit without delay. Repeat if necessary to obtain a different action mark.
 2. Do not permit submittals marked "Not Approved, Revise and Resubmit" to be used at the Project site or elsewhere where Work is in progress.
- C. Other Action:
 1. Where a submittal is primarily for information or record purposes, special processing or other activity, the submittal will be returned, marked "Action Not Required."

3.4 RECORD DOCUMENTS:

- A. General:
 1. Contractor shall keep one record copy of all Specifications, Drawings, addenda, modifications, shop drawing and product data at the site, in good order and annotated to show all changes made during the construction process.
- B. Submittals:
 1. These record documents shall be available for Owner's and Engineer's review during the construction process and delivered to the Engineer upon completion of the Work.
- C. Engineer's Action:
 1. Engineer shall retain all record documents.

3.5 TESTING RESULTS:

- A. Submittals:
 1. Contractor shall supply Owner and Engineer with copies of any testing results taken on any element of the Work.
- B. Engineer's Action:
 1. Engineer shall review all test results and approve or disapprove in relation to the standards set forth in these Contract Documents.
 - a. Approval: Approval means no further testing is required.

- b. Disapproval: Disapproval means further testing may be required.

END OF SECTION

SECTION 01500 TEMPORARY FACILITIES

PART 1 - GENERAL1.1 DESCRIPTION:

A. Summary:

1. This Section specifies requirements for temporary services and facilities, including utilities, construction and support facilities, security and protection.

B. Temporary utilities:

1. Temporary electrical service or portable generator.

C. Temporary construction and support facilities:

1. Temporary construction and support facilities required include but are not limited to:
 - a. Demolition Services
 - b. Temporary enclosures
 - c. Temporary Project identification signs and bulletin boards
 - d. Waste disposal services
 - e. Construction aids and miscellaneous services and facilities
 - f. Traffic control (Vehicular, Pedestrian and Watercraft)

D. Security and protection facilities:

1. Security and protection facilities required include but are not limited to:
 - a. Barricades, warning signs, lights
 - b. Environmental protection

1.2 QUALITY ASSURANCE:

A. Regulations:

1. Comply with industry standards and applicable laws and regulations if authorities having jurisdiction, including but not limited to:
 - a. Utility company regulations
 - b. Police, fire department and rescue squad rules
 - c. Environmental protection regulations

- B. Electrical Service:
 - 1. Temporary electrical service or generator.
- C. Inspections:
 - 1. Electrical inspection for temporary electrical service.

PART 2 - PRODUCTS

2.1 MATERIALS:

- A. General:
 - 1. Provide new materials, if acceptable to the Engineer, undamaged previously used materials in serviceable condition may be used. Provide materials suitable for the use intended.

2.2 EQUIPMENT:

- A. General:
 - 1. Provide new equipment, if acceptable to the Engineer, undamaged, previously used equipment in serviceable condition may be used. Provide equipment suitable for use intended.
- B. First Aid Supplies:
 - 1. Comply with governing regulations.

PART 3 - EXECUTION

3.1 INSTALLATION:

- A. General:
 - 1. Use qualified personnel for installation of temporary facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
 - 2. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.
- B. Temporary Utility Installation:
 - 1. Not applicable
- C. Use Charges:

1. Not applicable
- D. Temporary Electric Power Service:
1. Applicable.
- E. Temporary Construction and Support Facilities Installation:
1. Locate field offices, storage sheds, sanitary facilities and other temporary construction and support facilities for easy access.
 2. Maintain temporary construction and support facilities until near Substantial Completion. Remove prior to Substantial Completion.
- F. Temporary Roads:
1. Construct and maintain temporary roads to adequately support the indicated loading and to withstand exposure to traffic during the construction period. Locate temporary roads, storage areas and parking where the same permanent facilities will be located.
- G. Collection and Disposal of Waste:
1. Collect waste from construction areas and elsewhere daily. Handle hazardous, dangerous or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material in a lawful manner.
- H. Environmental Protection:
1. Provide protection, operate temporary facilities and conduct construction in ways and by methods that comply with environmental regulations and minimize the possibility that air, waterways and subsoil might be contaminated or polluted or that other undesirable effects might result. Restrict use of noise-making tools and equipment to hours that will minimize complaints from persons or firms near the site.
- I. Termination and Removal:
1. Unless the Engineer requests that it be maintained longer, remove each temporary facility when the need has ended or when replaced by authorized use of a permanent facility or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces and replace construction that cannot be satisfactorily repaired.
 2. Materials and facilities that constitute temporary facilities are property of the contractor.
 3. Where the area is intended for landscape development, remove soil and aggregate fill that does not comply with requirements for fill or subsoil in the area. Remove materials contaminated with road oil, asphalt and other petrochemical compounds

and other substances, which might impair growth of plant materials or lawns. Repair or replace street paving, curbs and sidewalks at the temporary entrances, as required by the governing authority.

END OF SECTION

SECTION 01600 MATERIALS & EQUIPMENT

PART 1 - GENERAL1.1 DESCRIPTION:

A. Summary:

1. This Section specifies administrative and procedural requirements governing the Contractor's selection of products for use in the Project.
2. The Contractor's Construction Schedule and the Schedule of Submittals are included under *Section 01300 "Submittals."*

B. Standards:

1. Refer to *Section 01090 "Definitions and Standards"* for applicability of industry standards to products specified.

C. Administrative procedures:

1. Administrative procedures for handling requests for substitutions made after award of the Contract are included under *Section 01631 "Product Substitutions."*

1.2 DEFINITIONS:

A. General:

1. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories" and similar terms. Such terms are self-explanatory and have well-recognized meanings in the construction industry.
2. **Products** are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system" and terms of similar intent.
3. **Named Products** are items identified by manufacturer's product name, including make or model designation, indicated in the manufacturer's published product literature, that are current as of the date of the Contract Documents.
4. **Materials** are products that are substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed or installed to form a part of the Work.
5. **Equipment** is a product with operational parts, whether motorized or manually operated, that requires service connections such as wiring or piping.

1.3 QUALITY ASSURANCE:

A. Source limitations:

1. To the fullest extent possible, provide products of the same kind, from a single source.
2. When specified products are available only from sources that do not or cannot produce a quantity adequate to complete Project requirements in a timely manner, consult with the Engineer for a determination of the most important product qualities before proceeding. Qualities may include attributes relating to visual appearance, strength, durability or compatibility. When a determination has been made, select products from sources that produce products that possess these qualities, to the fullest extent possible.

B. Compatibility of Options:

1. When the Contractor is given the option of selecting between two or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.

1.4 PRODUCT DELIVERY, STORAGE AND HANDLING:

A. General:

1. Deliver, store and handle products in accordance with the manufacturer's recommendations, using means and methods that will prevent damage, deterioration and loss, including theft.
2. Schedule delivery to minimize long-term storage at the site and to prevent overcrowding of construction spaces.
3. Coordinate delivery with installation time to ensure minimum holding time for items that are easily damaged or sensitive to deterioration, theft and other losses.
4. Deliver products to the site in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting and installing.
5. Inspect products upon delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
6. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.
7. Store products subject to damage by the elements above ground, under cover in a weather-tight enclosure, with ventilation adequate to prevent condensation.

PART 2 - PRODUCTS2.1 PRODUCT SELECTION:

- A. General Product Requirements:
1. Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, unused at the time of installation.
 2. Provide products complete with all accessories and other devices and details needed for complete installation and operation of the system.
- B. Standard Products:
1. Where available, provide standard products of types that have been produced and used successfully in similar situations on other Projects.
- C. Product Selection Procedures:
1. Product selection is governed by the Contract Documents and governing regulations, not be previous Project experience. Procedures governing product selection include the following:
 - a. Where products or manufacturers are specified by name, accompanied by the term "or equal," or "or approved equal" comply with the Contract Document provisions concerning "substitutions" to obtain approval for use of an unnamed product.
- D. Non-Proprietary Specifications:
1. When the Specifications list products or manufacturers that are available and may be incorporated in the Work, but do not restrict the Contractor to use of these products only, the Contractor may propose any available product that complies with Contract requirements. Comply with Contract Document provisions concerning "substitutions" to obtain approval for use of an unnamed product.
- E. Performance Specification Requirements:
1. Where Specifications require compliance with performance requirements, provide products that comply with these requirements and are recommended by the manufacturer for the application indicated. General overall performance of a product is implied where the product is specified for a specific application.
 2. Manufacturer's recommendations may be contained in published product literature or by the manufacturer's certification of performance.
- F. Compliance with Standards, Codes and Regulations:

1. Where the Specifications only require compliance with an imposed code, standard or regulation, select a product that complies with the standards, codes or regulations specified.

PART 3 - EXECUTION

3.1 INSTALLATION OF PRODUCTS:

A. General:

1. Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other Work.
2. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

END OF SECTION

SECTION 01700 PROJECT CLOSEOUT

PART 1 - GENERAL1.1 DESCRIPTION:

A. Summary:

1. This Section specifies administrative and procedural requirements for Project closeout, including but not limited to:
 - a. Inspection procedures
 - b. Project record document submittal
 - c. Submittal of warranties
 - d. Final cleaning
2. Closeout requirements for specific construction activities are included in the appropriate Section in Divisions 2 through 4.

1.2 SUBSTANTIAL COMPLETION:

A. Preliminary Procedures:

1. Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.
2. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.
3. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete items, and the value of incomplete construction and reasons the Work is not complete.
4. Advise Owner of pending insurance changeover requirements.
5. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications and similar documents.
6. Obtain and submit to Owner releases enabling the Owner unrestricted use of the Work and access to services and utilities; include occupancy permits, operating certificates and similar releases.
7. Submit to Engineer record Drawings, maintenance manuals, final Project photographs, damage or settlement survey, property survey and similar final record information.

8. Deliver to owner tools, spare parts, extra stock and similar items.
9. Complete start-up testing of systems and instruction of the Owner's operating and maintenance personnel. Discontinue or change over and remove temporary facilities from the site, along with construction tools, mock-ups and similar elements.
10. Complete final clean-up requirements.

B. Inspection Procedures:

1. On receipt of a request for inspection, the Engineer will either proceed with inspection or advise the Contractor of unfilled requirements. The Engineer will either prepare the Certificate of Substantial Completion following inspection or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.
2. The Engineer will repeat inspection when requested and assured that the Work has been substantially completed.
3. Results of the completed inspection will form the basis of requirements for final acceptance.

1.3 FINAL ACCEPTANCE:

A. Preliminary Procedures:

1. Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.
2. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
3. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
4. Submit a certified copy of the Engineer's final inspection list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance and the list has been endorsed and dated by the Engineer.
5. Submit consent of surety to final payment.
6. Submit a final liquidated damages settlement statement.
7. Submit evidence of final, continuing insurance coverage complying with insurance requirements.

B. Reinspection Procedure:

1. The Engineer will reinspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed because of circumstances acceptable to the Engineer.
2. Upon completion of reinspection, the Engineer will either prepare a certificate of final acceptance or advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
3. If necessary, reinspection will be repeated.

1.4 RECORD DOCUMENT SUBMITTALS:

A. General:

1. Do not use record documents for construction purposes; protect from deterioration and loss in a secure location; provide access to record documents for the Engineer's reference during normal working hours.

B. Record Drawings:

1. Maintain a clean, undamaged set of blue or black line prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
2. Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the Work.
3. Mark new information that is important to the Owner but was not shown on Contract Drawings or Shop Drawings.
4. Note related Change Order numbers where applicable.
5. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets and print suitable titles, dates and other identification on the cover of each set.

C. Record Specifications:

1. Maintain one complete copy of the Contract Documents, including addenda, and one copy of other written construction documents such as Change Orders and modifications issued in printed form during construction. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation. Note related record drawing information and Product Data.
 2. Upon completion of the Work, submit record Specifications to the Engineer for the Owner's records.
- D. Record Product Data:
1. Maintain one copy of each Product Data submittal. Mark these documents to show significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the site and from the manufacturer's installation instructions and recommendations. Give particular attention to concealed products and portions of the Work, which cannot otherwise be readily discerned later by direct observation. Note related Change Orders and mark-up of record Drawings and Specifications.
 2. Upon completion of mark-up, submit complete set of record Product Data to the Engineer for the Owner's records.
- E. Maintenance Manuals:
1. Organize operating and maintenance data into suitable sets of manageable size. Include the following types of information:
 - a. Emergency instructions
 - b. Spare parts list
 - c. Copies of warranties
 - d. Wiring diagrams
 - e. Inspection procedures
 - f. Shop Drawings and Product Data

PART 2 - PRODUCTS

NIL

PART 3 - EXECUTION

3.1 CLOSEOUT PROCEDURES:

- A. Operating and Maintenance Instructions:
1. Arrange for each installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. If installers are not experienced in procedures, provide instruction by manufacturer's representatives. Include a detailed review of the following items:
 - a. Maintenance manuals
 - b. Record documents
 - c. Spare parts and materials
 - d. Tools
 - e. Lubricants
 - f. Identification systems
 - g. Control sequences
 - h. Hazards
 - i. Cleaning
 - j. Warranties and bonds
 - k. Maintenance agreements and similar continuing commitments

3.2 FINAL CLEANING:

- A. General:
1. General cleaning during construction is required by the General Conditions and included in *Section 01500 "Temporary Facilities."*
- B. Cleaning:
1. Employ experienced workers for final cleaning. Clean each unit to the condition expected for normal operation. Comply with manufacturer's instructions.
 2. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion.
 - a. Clean the site, including landscape development areas, of rubbish, litter and other foreign substances. Sweep paved areas broom clean; remove stains, spills and other foreign deposits.
- C. Removal of Protection:

1. Remove temporary protection and facilities installed for protection of the Work during construction.
- D. Compliance:
1. Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.
 2. Where extra materials of value remaining after completion of associated Work have become the Owner's property, arrange for disposition of these materials as directed.

END OF SECTION

SECTION 322000 – CRUSHED GRANITE TRAILS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The general provisions of the Contract, including General conditions and general requirements apply to the work specified in this section.
- B. Related sections include the following:

1.2 SCOPE OF WORK

- A. The contractor shall furnish all materials, labor and equipment necessary to install trails as shown within the contract drawings and described in the specifications.

1.3 DELIVERY, STORAGE AND HANDLING

- A. Stockpile, transport, remove and spread aggregates in a manner that will preserve gradation and avoid contamination.

1.4 METHOD OF PAYMENT

- A. Unit Price per Contract

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced installer who has performed aggregate base installation and compaction for a minimum of at least five years and with a record of successful in-service performance.
- B. Aggregate Products: Provide certifications for material type and gradation.
- C. Timber Products: Provide certifications for type of wood and compliance with AWPA treatment standards.

PART 2 - PRODUCTS

2.1 SURFACE MATERIALS

- A. Screened Granite – Shall be free of organic material, mica, clay or other deleterious material. Particle size shall be distributed as follows:

Particle Size	% of passing
3/8"	100%
No. 4	90 – 100%
No. 8	55 – 80%
No. 16	40 – 70%
No. 30	25 – 50%
No. 200	6 – 15%

2.2 EDGING MATERIALS

- A. Timber – Shall be 6" x 4" treated, conforming with AWPA UC 4B. Minimum segmental length shall be 8'.
- B. Iron Rebar Pins – Grade 60, ASTM A615.

2.3 GEOTEXTILES

- A. Shall be non-woven polypropylene (unless otherwise approved by the engineer) and have the following properties:
 - 1. Mass per unit area (ASTM D 3776) 4 oz. / sq. yd.
 - 2. Thickness (ASTM D 1777) 60 MLS.
 - 3. Flow rate (ASTM D 449) 100 GPM/SF.
 - 4. Puncture resistance (ASTM D 3787) 50 lbs.
 - 5. Trapezoidal tear strength (ASTM D 4533) 40 lbs.
 - 6. Grab tensile strength (ASTM D 463) 100 lbs @ 60%.

PART 3 - EXECUTION

3.1 LAYOUT AND ALIGNMENT

- A. Prior to earthwork, the trail alignment shall be flagged by the contractor and reviewed by the owner for approval.
- B. When using rigid edging material such as timber, curved portions of the trail shall be "best fit" using straight segments and maintain the minimum trail width as shown on the drawing. Timber may be cut to a minimum of 4' lengths on one side of trail to accommodate curves. Edging timbers less than 8' in length may not be placed continuous unless approved by the engineer.
- C. Longitudinal slope shall not equal or exceed 5% unless handrails are provided.
- D. Top of trail shall be maintained above existing adjacent grades. Cross slope shall be in the direction as indicated on the plans, but shall generally be in the direction of existing grade in areas of relatively flat (<5%) topography.

3.2 CLEARING

- A. A clearing zone shall be provided for the trail, with horizontal limits extending a minimum of four feet from the outside of edging material and vertical limits extending a minimum of eight feet above the finished elevation of the trail. Vegetation shall be removed from the clearing zone. For limbs hanging within the clearing zone but originating from stems outside the clear zone, the limbs shall be pruned at or beyond the clear zone limits.

3.3 TRAIL CONSTRUCTION

- A. Subgrade shall be firm and consist of primarily sandy soils, and shall not contain root material or significant amounts of organics and fine grades material. If such material is present, the contractor shall notify the engineer for inspection of the subgrade.
- B. Place base course material over subgrade, maintain cross slope as indicated on the plans.
- C. Compact sub-base and base courses at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry density according to ASTM D 698.
- D. When thickness of compacted aggregates is 6 inches or less, place materials in a single layer.
- E. When thickness of compacted sub-base or base course exceeds 6 inches, place materials in equal layers, with no layer more than 6 inches thick or less than 3 inches thick when compacted.
- F. Total thickness of compacted aggregate measured in place shall not be less than ½" of that specified on the plan thickness at any single location, with the average of test locations not being less than the plan thickness.

3.4 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's property.

END OF SECTION

PART 1 - GENERAL

1.1 DESCRIPTION:

A. Work Included:

1. Main items of work include the following:
 - a. Wood grounds, nailers and blocking
 - c. Wood framing
 - d. Wood decking
 - e. Miscellaneous materials

B. Submittals:

1. Material Certificates
 - a. List of grade, species and moisture content of materials used as to certify compliance with the specification requirements.
2. Wood Treatment Data
 - a. Submit chemical treatment manufacturer's instructions for handling, storing, installation, and finishing of treated materials.
3. Preservative Treatment
 - a. Preservative treatment shall be in accordance with the UC4B, UC4C, and UC5B use categories

1.2 DELIVERY AND STORAGE:

A. Lumber and Marine Grade Concrete Panels

1. Keep materials under cover and dry. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber as well as plywood and other panels; provide for air circulation within and around stacks and under temporary coverings including polyethylene and similar material.

1.3 JOBSITE CONDITIONS:

A. Coordination:

1. Fit carpentry work to other work; scribe and cope as required for accurate fit. Correlate location of furring, nailers, blocking, grounds and similar supports to allow attachment of other work.

PART 2 - PRODUCTS

2.1 MATERIALS:

A. Lumber Standards:

1. Manufacture lumber to comply with PS20 "American Softwood Lumber Standard" and with applicable grading rules of inspection agencies certified by ALSC Board and Review.

B. Grades and Species:

1. Light framing (2" to 4" thick, 2" to 4" wide): #2 SYP UC4B 0.60 CCA or Equivalent
2. Structural framing (2" to 4" thick, 5" and wider): #2 SYP UC4B 0.60 CCA or Equivalent - Southern Pine graded under SPIB rules which meets or exceeds the following values:
 - Fb: 1200 psi
 - E : 1,200,000 psi
3. Joists: Same as Structural Framing.
4. Piles UC – 4C 6x6 or 8" butt diameter marine contact AWWA C18

5. Curbing and Handrails: same as structural framing and no CCA treatment allowed AWPB UC4B
 6. Decking: same as structural framing except #1 lumber shall be used and no CCA treatment allowed AWPB UC 4B
- C. Miscellaneous Materials:
1. Fasteners and Anchorage: Provide size, type, material and finish as indicated on the plans, and as recommended by applicable standards, complying and applicable NC Building Code and Federal Specifications for nails, staples, screws, bolts, nuts, washers and anchoring devices. All anchoring devices will be rated for use with the chosen materials. Nails, staples, and screws shall be stainless steel Type 316 rated for saltwater exposure. Bolts are to be Hot Dipped Galvanized meetings ASTM A153

2.2 WOOD TREATMENT:

- A. Preservative Treatment
1. Where lumber is indicated as "Treated" or is specified herein to be treated, comply with applicable requirements of AWPB Use Code Standards Mark each treated item with the AWPB Quality Mark Requirements. UC4B (framing and decking) and UC5B (piles)
 2. Pressure treat above ground items with water borne preservatives to comply with AWPB LP-2. After treatment, kiln-dry lumber and plywood to a maximum moisture content of 19%. Treat indicated items.
 - a. Wood decking

PART 3 - EXECUTION

3.1 INSTALLATION:

- A. General:
1. Discard units of material with defects which might impair quality of work, and units which are too small to use in fabricating work with minimum joints or optimum joint arrangement.
 2. Set carpentry work to require levels and lines, with members plumb and true to line and cut and fitted.
 3. Securely attach carpentry work to substrate by anchoring and fastening as shown and as required by recognized standard practices.
- B. Wood Framing:
1. Provide framing members of sizes and on spacing shown and frame openings as shown or if not shown, comply with recommendations of "Manual for House Framing" of NFPA. Do not splice structural members between supports.
 2. Anchor, bolt and nail all members as required by the N.C. State Building Code or as illustrated on the plans.
- C. Floor Joist Framing
1. Provide framing of sizes and spacing shown.
 2. Install all framing and blocking as per N.C. Commercial Building Code.
- D. Decking Wooden and Concrete
1. Material for wooden decking shall be routed no. 1 graded material with a moisture content of less than 19%.

END OF SECTION 06 15 00