

CONTRACT DOCUMENTS, PROPOSAL and SPECIFICATIONS

City of Orange Beach Art Center Site Improvements



July 2017

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City of Orange Beach, Alabama
CONTRACT DOCUMENTS,
PROPOSAL AND SPECIFICATIONS

Art Center Site Improvements

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SECTION I

ADVERTISEMENT FOR BIDS

Sealed proposals will be received by City of Orange Beach, AL (hereinafter called "Owner"), at the City of Orange Beach City Hall, 4099 Orange Beach Blvd., P. O. Box 458 Orange Beach, AL 36561 until 11:00 a.m. CST Thursday July 27, 2017, for furnishing all labor and materials, and performing all work required by the following project:

CITY OF ORANGE BEACH ART CENTER SITE IMPROVEMENTS

Be advised that overnight delivery by express or courier of sealed proposals to the City of Orange Beach is not guaranteed.

The work generally consists of the following:

Widening and improving Nancy Lane, construction of new Asphalt and new concrete roads, construction of asphalt parking areas as well as porous (reinforced grass) parking areas, concrete sidewalks, drainage improvements, and construction of a new entrance for access to State Highway 180.

One Hundred Fifty Days (150) calendar days are allowed for the construction of the project. All bids must be on blank forms provided in the specifications. A certified check or a Bidder's Bond, payable to the Owner for an amount not less than five percent (5%) of the amount bid, but in no event more than ten thousand (\$10,000.00) dollars, shall be filed with the proposal, the Bidder's Bond being prepared on the form specified and signed by a bonding company authorized to do business in the State of Alabama.

A Performance Bond in the form and terms approved by the Owner in an amount not less than the sum bid will be required at the signing of the Contract, and in addition, a bond in the form and terms approved by the Owner in an amount not less than one hundred percent (100%) of the Contract price insuring payment for all labor and materials. In addition, the Contractor must furnish to the Owner at the time of the signing of the Contract, Certificate of Insurance coverage as shown in the specifications.

Liquidated damages for non-completion of the work within the time limit agreed upon will be assessed in accordance with the terms of the Contract.

Plans and specifications are on file and may be seen in the office of the Project Engineer, Sawgrass Consulting, LLC., 11143 Old Highway 31, Spanish Fort, AL 36527. The cost of a plan set and specifications is \$45.00. The Plans may be viewed on the City of Orange Beach Website (www.cityoforangebeach.com). No plans or specifications will be issued to Contractors later than twenty-four (24) hours prior to the time indicated above for receiving bids.

No bids will be considered unless the bidder, whether resident or non-resident of Alabama, is properly qualified to submit a proposal for this construction in accordance with all applicable laws of the State of Alabama. This shall include evidence of holding a current license from the State Licensing Board for General Contractors, Montgomery, Alabama. In addition, non-residents of the State, if a corporation, shall show evidence of having qualified with the Secretary of State to do business in the State of Alabama.

The right is reserved to reject any and/or all bids and to waive informalities and to furnish any item of material or work to change the amount of said Contract.

No bid shall be withdrawn for a period of sixty (30) days subsequent to the opening of bids without the consent of the Owner.

A mandatory pre-bid conference will be held at 10:00am on Thursday July 20, 2017, in the Orange Beach City Hall Council Chambers.

OWNER

SECTION II

INSTRUCTIONS TO BIDDERS

Hereinafter Contract Documents shall include "Contract Documents, Proposal and Specifications", Sections I through XII; Owner shall be City of Orange Beach; Engineer shall be Sawgrass Consulting, LLC.

1. **RECEIPT AND OPENING OF BIDS:**

The Owner invites bids on the form attached hereto, all blanks of which must be appropriately filled in. Bids will be received by the Owner at the Orange Beach City Hall, 4099 Orange Beach Blvd., P. O. Box 458 Orange Beach, AL 36561 until 11:00 a.m. at local time on July 27, 2017. The envelopes containing the bids must be sealed and addressed to the City of Orange Beach. The Contractor's name and license number must be shown on the outside of the envelope. The entire booklet must be submitted as the bid.

Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered.

Be advised that overnight delivery by express or courier of sealed proposals to the City of Orange Beach is not guaranteed.

Forms furnished, or copies thereof shall be used, and strict compliance with requirements of the invitation, these instructions and the general specifications for material and construction are necessary. Special care should be exercised in the preparation of bids. Bidders must make their own estimates of the facilities and difficulties attending the proposed contract, including local conditions, uncertainty of weather, quantities and all other contingencies. All designations and prices shall be fully and clearly set forth. The proper blank spaces in the bid and guaranty forms shall be suitably filled in.

2. **LABOR AND MATERIALS:**

The Owner will not furnish any labor, material, or supplies unless specifically provided for in the contract.

3. **SIGNATURE TO BIDS:**

Each bid must give the full business address of the bidder and be signed by him with his usual signature. Bids by partnerships must furnish the full names of all partners and must be signed with the partnership name by one of the members of the partnership, or by an authorized representative, followed by the signature and designation of the person signing. Bids by corporations must be signed with the legal name of the corporation followed by the name of the State of Incorporation and by the signature and designation of the president, secretary, or other person authorized to bind it into the matter. The name of each person shall also be typed or printed below the signature. A bid by a person who affixes to his signature the word "president", "secretary", "agent", or other designation without disclosing his principal, may be held to the bid of the individual signing. When requested by the Owner, satisfactory evidence of the authority of the officer signing on behalf of the corporation shall be furnished.

4. **BIDDER QUALIFICATIONS:**

The Owner may make such investigations as he deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Contractor shall furnish data showing that they have a minimum of three (3) years experience in the field of construction pertinent to the Contract Documents as a licensed general contractor and said information shall accompany the bid. The Owner reserves the right to reject any bid if the evidence submitted, or investigation of such bidder, fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the Contract and to furnish all materials contemplated therein. Conditional bids will not be accepted.

5. **GUARANTY AND INSURANCE:**

Security is required to insure the execution of the Contract and bond for performance of the services, and no bid will be considered unless it is so guaranteed. The bidders must furnish with their bid a Guaranty Bond or certified check in the amount of five (5%) percent of their bid price, but in no event more than ten thousand (\$10,000.00) dollars, payable to the Owner. Certified check or Bid Bonds, will, at the option of the Owner, be deposited into the funds of the Owner, as liquidated damages upon failure of the successful bidder to execute the written Contract and furnish the insurance coverage as hereinafter required, within ten consecutive calendar days following written notice of the award of the Contract.

6. **BONDS AND INSURANCE:**

The bonds and insurance policies of any surety company or insurance company respectively, authorized to do business in the State of Alabama will be accepted as security and insurance as required, for any bid or contract. See the instruction hereinafter contained and the applicable standard forms with respect to the type, form and amounts of required bonds and insurance policies.

7. **SPECIFICATIONS AND SCHEDULES:**

The specifications, conditions, schedules and drawings which form the basis of any bid will be considered as a part thereof and will form a part of the Contract. Copies of these papers, together with a copy of the standard contract form, including authorized additions, or deletions, if any, will be furnished to or made available for the inspection of bidders by the office indicated in the advertisement or invitation.

8. **CORRECTIONS:**

Erasures or other changes in the bids must be explained or noted over the signature of the bidder.

9. **BIDDERS PRESENT:**

At the time fixed for the opening of the bids, their contents will be made public for the information of bidders and others properly interested, who may be present either in person or by representation.

10. **AWARD OR REJECTION OF BIDS:**

The contract will be awarded to the lowest responsible bidder complying with the conditions of the invitation for bids, provided his bid is reasonable and it is to the best interest of the Owner to accept it. The bidder to whom the award is made will be awarded by Council on August 1, 2017. The Owner, however, reserves the right to reject any and all bids and to waive informality in bids received whenever such rejection or waiver is in the interest of the Owner.

It also reserves the right to reject the bid of a bidder who has previously failed to perform properly or complete on time a contract of a similar nature, or a bid of a bidder who is not in a position to perform the contract.

11. **BIDDERS INTERESTED IN MORE THAN ONE BID:**

If more than one bid be offered by any one party, by or in the name of his or their clerk, partner or other person, all such bids may be rejected. A party who has quoted prices on materials to a bidder is not thereby disqualified from quoting prices to other bidders or from submitting a bid directly for the materials or work.

12. **ERRORS IN BID:**

Bidders or their authorized agents are expected to examine the maps, drawings, specifications, and all other instructions pertaining to the work, which will be open to their inspection. Failure to do so will be at the Bidder's own risk, and he cannot secure relief on the plea of error in the bid. In case of error in the extension of prices, the unit price, will govern.

13. **CONTRACT AND BOND:**

The bidder to whom award is made must, when required, enter into written contract on the standard form as set out herein with satisfactory security in the amount required, within the period specified or, if no period is specified, within then (10) days after the prescribed forms are presented to him for signature.

14. **COLLUSION:**

If there is any reason for believing that collusion exists among the Bidders, any or all proposals may be rejected, and those participating in such collusion may be barred from submitting bids on the same or other work with the Owner.

15. **SUBLETTING OR ASSIGNING OF CONTRACT:**

(a) Limitations: The Contractor shall not sublet, assign, transfer, convey, sell or otherwise dispose of any portion of the contract, his right, title, or interest therein, or his power to execute such contract, to any person, firm or corporation without written consent of the Owner and such written consent shall not be construed to relieve the Contractor of any responsibility for the fulfillment of the contract. Unless otherwise stipulated in the proposal or special provisions and with the assistance of workmen under his immediate superintendence and reported on his payroll, all contract work of a value not less than fifty percent (50%) of the total contract amount, except that any items designated in the contract as "Specialty Items" may be performed by subcontract, may be deducted from the total contract amount before computing the amount of work required to be performed by the contractor with his own organization.

(b) Subcontractor's Status: A subcontractor shall be recognized only in the capacity of an employee or agent of the contractor and the contractor will be responsible to the Owner for all of the subcontractor's work, including failures or omissions; and his removal may be required by the Engineer, as in case of an employee.

16. **TIME OF COMPLETION:**

Bidders must agree to commence on or before a date to be specified in written "work order" of the Owner and to fully complete the project within One Hundred Fifty (150) calendar days thereafter. The bidder must agree also to pay as liquidated damages, the sum shown in this document for each calendar day required thereafter.

17. **ADDENDA AND INTERPRETATIONS:**

No interpretation of the meaning of the plans, specifications or other pre-bid documents will be made to any bidder orally.

Every request for such interpretation should be in writing, addressed to Sawgrass Consulting, LLC, 11143 Old Highway 31, Spanish Fort, AL 36527, and to be given consideration, must be received at least five (5) days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which if issued, will be forwarded by electronic facsimile (fax) or mailed by certified mail with return receipt requested to all prospective bidders (at the respective addresses furnished for such purposes). Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the contract documents.

18. **POWER OF ATTORNEY:**

Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

19. **LAWS AND REGULATIONS:**

The bidders attention is directed to the fact that all applicable state laws, municipal ordinances, and rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full. This agreement shall be governed, construed, and enforced in accordance with the laws of the State of Alabama without regard for its Conflict of Laws Rule.

20. **OBLIGATION OF BIDDER:**

At the time of the opening of bids each bidder will be presumed to have read and to be thoroughly familiar with the plans and contract documents (including all addenda). The failure or omission of any bidder to examine any form, instrument or document shall in no way relieve any bidder from any obligation in respect of his bid.

21. **QUANTITIES:**

The quantities indicated are to aid the contractor in bidding only and any variance upward or downward in quantities shown will not alter the contract unit price.

22. **UTILITIES:**

All information given on the drawings or in the contract documents relative to existing utilities and other structures is from the best source at present available. All such information is furnished only for the information and convenience of the bidders.

The Contractor shall be responsible for any damages to existing utilities and shall repair and/or replace any damages to said utilities at his own expense.

23. **LIGHTS AND BARRICADES:**

The Contractor shall furnish and maintain sufficient and adequate danger signals, lights, barriers, etc., necessary to prevent accidents and to protect the work.

24. **MAINTENANCE PERIOD:**

The Contractor will be required to maintain the project for a period of forty-five (45) calendar days after acceptance by the Owner.

25. **REQUESTS FOR INFORMATION/CLARIFICATION:**

All requests for information/clarification regarding this project shall be submitted in writing to the engineer either by facsimile to 251-544-7918 or USPS to 11143 Old Highway 31, Spanish Fort, AL 36527. Absolutely no telephone calls will be accepted and no questions will be answered 24 hours prior to bid opening.

SECTION III

**CERTIFICATE OF
CONTRACTOR'S AND SUBCONTRACTOR'S INSURANCE TO OWNER**

OWNER: _____ DATE: _____

This is to certify that the policies designated below have been issued by the _____ and are in full force on the date borne by this certificate.

1. Location and designation of project:
**Art Center Site Improvements
Orange Beach, Alabama**

2. Name and address of insured for whom this certificate is issued:

3. Type of insurance/Limits of Liability

(a) Workmen's Compensations:

(policy number) (exp. date) (coverage) (aggregate)
(one person) (one accident)

(b) Contractor's Public Liability:

1. Bodily Injury:

(each person) (each occurrence)(total coverage)

2. Property Damage:

(each accident) (aggregate)

(c) Automobile (Motor Vehicle):

1. Bodily Injury:

(each person) (each occurrence)(total coverage)

2. Property Damage:

(each accident) (aggregate)

(d) Owner's Protective Liability:

(Each Occurrence) (Each Occurrence)
(Bodily Injury) (Property Damage)

Such insurance as is afforded by the above policies covers the operations undertaken by the insured with respect to the construction of the project above designated. The insurance afforded by the above designated policies, specimen copies of which have been filed with the Owner, and to each of which is attached for following endorsement.

The insurer agrees with the insured as follows:

1. That it will furnish to said Owner a certificate of insurance in triplicate on a form approved for such purpose by said Owner, setting forth the pertinent information regarding the policy to which this endorsement is attached, for each project of said Owner to which the policy applies.
2. That it will attach to each said certificate of insurance executed copies of any endorsement other than this endorsement which are attached to said policy at the time said policy is issued, provided only that said endorsements affect the coverage of said policy in respect of operations involved in the construction of the projects of said Owner to which the policy applies.
3. That it will mail to the Owner three executed copies of each endorsement subsequently issued to become a part of said policy provided only that endorsement affects the coverage of said policy in respect of operations involved in the construction of the project of said Owner which the policy applies, and provided further that such endorsement shall not be effective unless such notice is given to the Owner at the same time that notice thereof is given to the insured.
4. That it will mail to the Owner at least ten (10) days before the effective date thereof notice of cancellation of said policy, provided no cancellation shall be effective unless such notice is given to the Owner.

Insurer

BY _____
Authorized Representative

SECTION IV

INSTRUCTIONS TO CONTRACTORS AND INSURERS

CONTRACTOR'S AND SUBCONTRACTOR'S INSURANCE: The Contractor shall not commence work under this Contract until he has obtained all the insurance required under this certificate and such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence work on his subcontract until the insurance required of the subcontractor has been so obtained and approved.

COMPENSATION INSURANCE: The Contractor shall procure and shall maintain during the life of this Contract Workmen's Compensation Insurance for all his employees to be engaged in work on the project under this Contract, and in case of any such work sublet, the Contractor shall require the subcontractor similarly to provide Workmen's Compensation Insurance for all of the latter's employees to be engaged in such work unless such employees are covered by the protection afforded by the Contractor's Workmen's Compensation Statute, the Contractor shall provide and shall cause each subcontractor to provide adequate Employer's General Liability Insurance for the protection of such of his employees as are not otherwise protected.

COMPREHENSIVE AUTOMOBILE LIABILITY INSURANCE: The Contractor agrees to carry a Comprehensive Automobile Liability Policy providing bodily injury liability on an occurrence basis, and providing property damage liability on an accident basis. This policy shall protect the Contractor against all liability arising out of the use of automobiles, both private, passenger, and commercial, regardless of whether such vehicles shall be owned by the Contractor, owned by others or be hired. Limits of liability for Comprehensive Automobile Liability Insurance shall be \$1,000,000 combined single limit per occurrence for bodily injury and property damage.

OWNER'S PROTECTIVE LIABILITY INSURANCE:

Insurance shall be in such form as will protect the Contractor from all claims and liabilities for damages for bodily injury, including accidental death, and for property damage, which may arise from operations under this contract whether such operation by himself or by anyone directly or indirectly employed by him.

AMOUNT OF INSURANCE

Ver.2016.04.26

Contractor agrees, at its sole expense, to maintain on a primary and non-contributory basis during the life of this Contract, or the performance of Work hereunder, insurance coverages, limits, and endorsements as set out below. Contractor agrees to obtain Commercial General Liability, Business Auto Liability, Contractor's Pollution Legal Liability, Inland Marine Builder's Risk Insurance, Worker's Compensation, and Commercial Umbrella/Excess Liability before starting the work. Contractor also agrees to undertake the obligation to insure that all subcontractors abide by these same insurance requirements.

The Contractor agrees the insurance requirements herein as well as City's review or acknowledgment is not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by the Contractor under this Contract. A copy of the policy shall be provided upon request.

Commercial General Liability

Contractor agrees to maintain Commercial General Liability at a limit of liability not less than \$1,000,000 Each Occurrence, \$2,000,000 Annual Aggregate. Contractor agrees its coverage will not contain any restrictive endorsement(s) excluding or limiting Product/Completed Operations, Independent Contractors, X-C-U Coverage, Contractual Liability, Personal Injury and Advertising Injury, Independent Contractors, or Cross Liability.

Business Automobile Liability

Contractor agrees to maintain Business Automobile Liability at a limit of liability not less than \$1,000,000 Each Occurrence. Coverage shall include liability for Owned, Non-Owned, and Hired Automobiles.

Contractor's Pollution Legal Liability

Contractor agrees to maintain Contractor's Pollution Legal Liability at a limit of liability not less than \$1,000,000 Each Occurrence, \$2,000,000 Annual Aggregate. The Contractor agrees the policy shall include a minimum three year Discovery (tail) reporting period, and a Retroactive Date that equals or precedes the effective date of the Contract, or the performance of Work hereunder. This coverage may be provided on a Per-Project Basis.

Inland Marine Builder's Risk Insurance

The Contractor, prior to notice to proceed or commencement of Work, whichever occurs first, agrees to maintain an Inland Marine Builder's Risk Insurance Coverage Form providing coverage to protect the interest of the City, Contractor, subcontractors, and property on or off-premises, which shall become part of the Work.

Coverage shall be written on a Replacement Cost, and Completed Value Form basis in an amount at least equal to one hundred percent (100%) of the ultimate projected completed value of the Work. This policy shall also include Delay Cost coverage for soft costs, which shall at a minimum include additional expenses for interest, legal, consulting, insurance, architectural and engineering, Contractor's overhead and general conditions, and equipment rental. The period of indemnity shall not be less than twelve (12) months and the limit of Delay Cost coverage not be less than ten percent (10%) of the projected completed value of the Work and shall be a scheduled limit on the policy in addition to a scheduled limit for the hard cost coverage. The waiting period for Delay Cost coverage may not exceed thirty (30) days. Collectively, the scheduled soft cost limit and hard cost limit may equal one hundred percent (100%) of the projected value of the Work, unless the builder's risk carrier requires the Delay Cost coverage to be in addition to the one hundred percent (100%) projected value of the Work.

The Contractor agrees to endorse the Inland Marine Builder's Risk insurance with a manuscript endorsement eliminating the automatic termination of coverage in the event the building is occupied in whole or in part, or put to its intended use, or partially accepted by City. The manuscript endorsement shall amend the automatic termination clause to only terminate coverage if the policy expires, is cancelled, the City's interest in the building ceases, or the building is accepted or insured by the City.

Worker's Compensation & Employer's Liability

Regardless of any "minimum requirements" of the State of Alabama, Contractor shall obtain Worker's Compensation insurance covering all workers involved in the Work. (Note: Elective exemptions or coverage through an employee leasing arrangement will violate this requirement.) Where applicable, U.S. Longshore and Harborworkers Compensation Act Endorsement and/or Maritime Coverage Endorsement shall be attached to the policy. Subcontractor shall also obtain Employer's Liability insurance with minimum limits of \$1,000,000 Each Accident, \$1,000,000 Disease Policy Limit, and \$1,000,000 Each Employee.

Commercial Umbrella/Excess Liability

Contractor agrees to maintain either a Commercial Umbrella or Excess Liability at a limit of liability not less than \$5,000,000 Each Occurrence, \$5,000,000 Aggregate. The Contractor agrees to endorse the City as an "Additional Insured" on the Commercial Umbrella/Excess Liability, unless the Commercial Umbrella/Excess Liability provides coverage on a pure/true follow-form basis, or the City is automatically defined as an Additional Protected Person.

Additional Insured Endorsements

The Contractor agrees to endorse the City as an Additional Insured on the Commercial General Liability with the following Additional Insured endorsement, or similar endorsement providing equal or broader Additional Insured coverage:

- CG2010 10 01 – Additional Insured; Owners, Lessees, or Contractors,
- CG2010 07 04 – Additional Insured; Owners, Lessees, or Contractors; Scheduled Person or Organization endorsement in combination with the additional endorsement of CG2037 10 01 – Additional Insured; Owners, Lessees, or Contractors

Completed Operations shall be required to provide back coverage for the Contractor's "your work" as defined in the policy and liability arising out of the products-completed operations hazard. (Attach an actual copy of the endorsement(s) – Contact your insurance agent.) The name of the organization endorsed as Additional Insured for all endorsement shall read "City of Orange Beach."

Deductibles, Coinsurance Penalties & Self-Insured-Retention

Contractor agrees to be fully and solely responsible for any deductible, coinsurance penalty, or self-insured retention expenses; including any loss not covered because of coinsurance penalty, or coverage exclusion or limitation. The Contractor agrees any Self-Insured-Retention or deductible shall not exceed \$25,000. For deductible amounts that exceed this amount, the Contract agrees, when requested by City, to maintain a Commercial Surety Bond in an amount equal to said deductible amount.

Waiver of Subrogation

Contractor agrees by entering into this written Contract to a Waiver of Subrogation in favor of the City. If a policy prohibits waiving subrogation rights without an endorsement, the Contractor agrees to endorse it with

a Waiver of Transfer of Rights of Recovery Against Others, or an equivalent endorsement. This Waiver of Subrogation requirement shall not apply to any policy which voids coverage if subrogation is waived.

Right to Revise or Reject

The City reserves the right to revise any insurance requirement based on insurance market conditions affecting the availability or affordability of coverage; or changes in the scope of work/specifications affecting the applicability of coverage. Additionally, the City reserves the right, but not the obligation, to review and reject and insurance policies failing to meet the criteria stated herein, or any insurer(s) providing coverage, due to its poor financial condition or failure to operate legally in the State of Alabama. In such events, City shall provide Contractor written notice of such revisions or rejections.

Certificate of Insurance

Contractor agrees to provide City a Certificate of Insurance evidencing the above coverages. If the Contractor receives a non-renewal or cancellation or other material change notice from an insurance carrier affording coverage required herein, Contractor agrees to notify the City immediately with specifics as to which coverage is no longer in compliance. The City shall have the right, but not the obligation, of prohibiting Contractor from entering the Work site until a new Certificate of Insurance is provided to the City evidencing the replacement coverage. The Contractor agrees the City reserves the right to withhold payment to Contractor until evidence of reinstated or replacement coverage is provided to the City. If the Contractor fails to maintain the insurance as set forth herein, the Contractor agrees the City shall have the right, but not the obligation, to purchase replacement insurance, which the Contractor agrees to reimburse any premiums or expenses incurred by the City.

The Contractor agrees the Certificate(s) of Insurance shall:

1. Clearly indicate the City has been endorsed on the Commercial Umbrella/Excess Liability, Inland Marine Builder's Risk Insurance, and Commercial General Liability policy as an Additional Insured. Clearly indicate the project name and project number.
2. Clearly indicated Certificate Holder(s) as follows:

Original to: City of Orange Beach, Alabama
Attn: City Clerk
P.O. Box 458
Orange Beach, AL 36561
Fax (251) 981-1442

INDEMNITY PROVISIONS: The Contractor shall indemnify and hold harmless the Owner and the Engineer and their agents and employees and Elected Officials from and against all claims, damages, losses, demands, payments, suits, actions, recoveries and judgments of every nature and description and expensed including attorneys' fees arising out of or resulting from the 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 a negligent act, omission or willful misconduct of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

The Contractor shall assume all risk and bear any loss or injury to property or persons occasioned by neglect or accident during the progress of Work until the same shall have been completed and accepted. He shall also assume all blame or loss by reason of neglect or violation of any state or federal law or municipal rule, regulation or order. The Contractor shall give to the proper authorities all required notices relating to the Work, obtain all official permits and licenses and pay all proper fees. He shall make good any injury that may have occurred to any adjoining building, structure or utility in consequence of the Work.

In any and all claims against the Owner or the Engineer or any of their agents or employees by any employee of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under the "INDEMNITY PROVISIONS" shall not be limited in any way by any limitation on the amount or types of damages, compensation or benefits payable by or for the

Contractor or any subcontractor under workmen's compensation acts, disability benefit acts or other employee benefit acts.

The obligations of the Contractor under these Paragraphs shall not extend to the liability of the Engineer's negligent acts, errors or omissions, or those of his employees or agents.

SUBCONTRACTOR'S PUBLIC LIABILITY AND PROPERTY DAMAGE INSURANCE: The Contractor shall require each of his subcontractors to produce and maintain during the life of his subcontract, subcontractor's Public Liability and Property Damage Insurance of the type specified in the above paragraph hereof in amounts approved by the Owner.

This certificate shall be used in submitting evidence of compliance with the above requirements. The insurance company's representative shall execute four signed copies of the certificate plus such additional copies as may be required for the company's records. One executed copy shall be forwarded to the Contractor for attachment to the original policy as an endorsement and three copies shall be submitted to The Owner.

Three executed copies of each subsequent endorsement affecting the coverage of policies, and of each cancellation shall be forwarded to The Owner in accordance with Items 3 and 4 of the insurer's agreement contained in this certificate.

SECTION V

PROPOSAL

DATE: _____

Proposal of _____

Alabama License No. _____ for constructing **Art Center Site Improvements** ; for the performance of all work and the furnishing of all labor and materials required by the Contract terms, specifications, and special provisions.

The specifications are attached hereto and specified and made a part hereof.

TO: **City of Orange Beach**

Dear Sirs:

The following proposal is made on behalf of _____ and no others. Evidence of authority to submit the proposal is herewith furnished. The proposal is made without collusion on the part of any person, firm, or corporation.

___ certify that ___ have carefully examined the plans for this project and the specifications hereto attached including the special provisions, and have also personally examined the site of work. On the basis of the specifications and plans ___ propose to furnish all necessary machinery, tools, apparatus, and other means of construction, and do all the work and furnish all the material in the manner specified.

___ further agree to complete all the work in ninety (90) calendar days.

___ understand that the quantities below are approximate only and are subject to either increase or decrease, and hereby propose to perform any increased or decreased quantities of work at the unit prices bid.

___ further propose to perform all "Force Account or Extra Work" that may be required of ___ on the basis provided in the specifications hereto attached, and to give such work _____ personal attention in order to see that it is economically performed.

___ further propose to execute the attached Contract Agreement as soon as the work is awarded to ___ and to begin and complete the work within the respective time limit provided for in the specifications and Notice to Contractors hereto attached.

The following items shall be constructed in accordance with the State of Alabama Department of Transportation Standard Specifications for Highway Construction, Latest Edition

NOTES:

1. The following unit prices shall include all labor, materials, equipment removal, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for.
2. Bidder understands that the Owner reserves the right to reject any and all bids.
3. The Bidder understands that he must submit this entire booklet with the bid.

SCHEDULE OF ITEMS
Art Center Site Improvements

ITEM #	DESCRIPTION	UNIT	QTY	UNIT PRICE	AMOUNT
201-A	CLEARING AND GRUBBING	ACRE	1		
205-A1	REMOVE AND RELAY EXISTING 18" RCP	LF	18		
205-A2	REMOVE AND RELAY EXISTING 24" HDPE	LF	52		
206-B	EXISTING CONCRETE SIDEWALK REMOVAL	SY	100		
206-C	EXISTING ASPHALT REMOVAL	SY	555		
206-C3	REMOVE EXISTING CONCRETE HEADWALLS	EA	2		
206-D	EXISTING CONCRETE CURB REMOVAL	LF	94		
206-E	EXIST. DRAINAGE PIPE REMOVAL (SIZE VARIES)	LF	109		
210-A	UNCLASSIFIED EXCAVATION	CY	865		
210-D	BORROW EXCAVATION	CY	262		
230-A	ROADBED PROCESSING	STA	19		
301-A	CRUSHED AGGREGATE BASE COURSE, 6" THICK	SY	3111		
305-B1	6" SANDY/GRAVEL BASE MIX (GRASS PAVERS)	CY	300		
305-B2	2" SAND CLAY BASE (BRICK PAVERS)	SY	25		
401-A	BIT. TREATMENT A	SY	234		
405-A	TACK COAT (0.075 GAL/SY)	GAL	225		
408-A	PLANNING/MILLING EXISTING ASPHALT	SY	308		

424-A	1" BIT. CONCRETE WEARING SURFACE LAYER, 110 LBS/SY (NANCY LANE)	TON	60		
424-A1	SUPERPAVE BIT. CONCRETE WEARING SURFACE LAYER. 135 LBS/SY	TON	16		
424-A2	1-1/2" LIGHT DUTY BIT. CONCRETE WEARING SURFACE LAYER. 165 LBS/SY	TON	40		
424-A3	1" MEDIUM DUTY BIT. CONCRETE WEARING SURFACE LAYER. 110 LBS/SY	TON	110		
424-B	1-1/2" MEDIUM DUTY BIT. CONCRETE BINDER LAYER. 165 LBS/SY	TON	165		
424-B1	2" BIT. CONCRETE CONCRETE LAYER, 220 LB/SY (NANCY LANE)	TON	46		
424-B2	SUPERPAVE BIT. CONCRETE UPPER BINDER LAYER, 330 LB/SY	TON	41		
424-B4	BINDER LAYER/LEVELING (110 LB/SY - 220 LB/SY) (NANCY LANE)	SY	308		
530-B1	22"X13" RCAP ROADWAY PIPE	LF	170		
535-A2	15" RCP	LF	20		
533-A3	18" RCP	LF	92		
600-A	MOBILIZATION	LS	1		
606-A	4" PERFORATED UNDERDRAIN	LF	390		
606-A1	4" PVC PIPE	LF	294		
610-D	6 OZ. FILTER BLANKET, NON-WOVEN	SY	1790		
610-D1	SEPARATION FABRIC (TERRATEX GS)	SY	2466		
610-D2	FILTER CLOTH - UNDERDRAIN	SY	109		
618-A	CONCRETE PAVEMENT, 6"	SY	1412		
618-A1	CONCRETE WALK INCLUDING H/C RAMP	SY	469		
618-A2	CONCRETE FLUME	LF	5		

619-A	15" PIPE END TREATMENT	EA	1		
619-B	PRECAST 6:1 SLOPE PAVED HEADWALL, 18"	EA	1		
621-A	JUNCTION BOX (8'x 6')	EA	1		
621-G	TYPE "PD" GRATE INLET, MODIFIED BOX 8'x6'	EA	1		
621-C1	GRATE INLET	EA	3		
621-H	NYLOPLAST RISER INLET	EA	5		
623-B	TYPE "F" CURB, CONCRETE	LF	36		
623-B1	TYPE "N" CURB, CONCRETE	LF	195		
623-B2	CONCRETE CURB, RIBBON	LF	237		
650-B	TOPSOIL, 3" THICK (From Stockpiles)	CY	282		
652-A	SEEDING, SEASONAL	ACRE	1.2		
654-A	SOLID SODDING	SY	1151		
654-A1	BERMUDA SOD	SY	1600		
656-A	MULCHING	ACRE	1.2		
665-J	SILT FENCING, TYPE A	LF	700		
665-Q	WATTLES	LF	100		
701-G	SOLID WHITE TRAFFIC STRIPE, CLASS 2, TYPE A	MILE	0.5		
703-A	TRAFFIC CONTROL MARKINGS AND TRAFFIC ARROWS	SF	50		
703-A1	TRAFFIC CONTROL LEGENDS, CL2, TYPE A (WHITE)	SF	550		
703-B	PAVEMENT MARKERS, CLASS AH TYPE "BLUE"	SF	515		
805-A	BRICK PAVERS	SY	25		
805-A1	GRASS PAVERS	SY	1600		
999-A	GRASSED DITCH SWALE	LF	345		
000-A	TRAFFIC CONTROL SCHEME	LS	1		
TOTAL					

CONTRACTOR'S NAME & GENERAL CONTRACTOR'S LICENSE NUMBER

_____ also propose to furnish a Contract Performance Bond, approved by the Owner in an amount equal to the total amount of the bid. This bond shall serve not only to guarantee the completion of the work on _____ part, but also to guarantee the excellence of both workmanship, and materials until the work is finally accepted.

Signature of Bidder (If Firm or Individual) _____

By: _____

Address of Bidder _____

Names and Addresses of Members of Firm _____

Signature of Bidder (Corporation) _____

_____ Business Address _____
President

_____ Business Address _____
Sect. & Treas.

Attest: _____ Incorporated in _____
State

(CORPORATE SEAL)

ITEM VI

BID BOND

KNOW ALL MEN BY THESE PRESENTS:

That _____ of
(Name of Contractor)

(Address)

as Principal, and _____ of
(Name of Surety)

_____, as Surety, are held and
(Address)

firmly bound unto **City of Orange Beach** as Obligee, in the full and just sum of FIVE PERCENT (5%) OF AMOUNT BID lawful money of the United States, for the payment (maximum amount of bond \$10,000) of which sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the said Principal is herewith submitting its proposal for:

Art Center Site Improvements

The condition of this obligation is such that if the aforesaid Principal shall be awarded the Contract the said Principal will, within the time required, enter into a formal Contract and give a good and sufficient bond to secure the performance of the terms of and conditions of the Contract, then this obligation to be void; otherwise, the Principal and the Surety will pay unto the Obligee the difference in money between the amount of the Contract as awarded and the amount of the proposal of the next lowest bidder, which amount shall not exceed ten thousand (\$10,000.00) dollars. If no other bids are received, the full amount of the proposal guarantee shall be so retained or recovered as liquidated damages for such default.

Signed, Sealed and Delivered _____
Date

Witness as to Principal: _____
Contracting Firm

BY: _____ (SEAL)

COUNTERSIGNED: _____ (SEAL)
Name of Surety

BY: _____

BIDS WILL NOT BE CONSIDERED UNLESS BID BOND IS SIGNED BY PRINCIPAL AND SURETY.

SECTION VII
PERFORMANCE BOND

KNOW ALL MEN: That we _____
(Insert here the name and address or legal title of the Contractor)

_____ hereinafter called the Principal,

(Insert here the name and address or legal title of one or more Sureties)

_____ and

_____ and

_____ hereinafter called the Surety or Sureties, are held and firmly bound unto the Owner in the sum of _____
_____ (\$ _____) for the payment whereof the Principal and
the Surety or Sureties bind themselves, their heirs, executors, administrators, successors and assigns, jointly and
severally, firmly, by these presents.

WHEREAS, the Principal has, by means of a written agreement, dated _____ entered into a
Contract with the Owner for **Art Center Site Improvements** which agreement is by reference made a part hereof,

NOW THEREFORE, The conditions of this obligation are such that if the Principal shall faithfully perform the
Contract on his part, and satisfy all claims and demands, incurred for the same, and shall fully indemnify and save
harmless the Owner from all cost and damage which he may suffer by reason of failure to do so, and shall reimburse
and repay the Owner all outlay and expense which the Owner may incur in making good for any such default thence
this obligation shall be null and void; otherwise, it shall remain in full force and effect.

PROVIDED, HOWEVER, that no suit, action or proceedings, by reason of any default whatever be brought on his
bond after twelve months from the day on which the final payment under the Contract falls due.

PROVIDED, further, that the said Surety or Sureties, for value received hereby stipulate and agree that no change,
extension of time, or addition to the terms of the Contract or to the work to be performed thereunder of the
specifications thereof shall in any way effect their obligations on this bond, and they do hereby waive notice of any
such change, extension of time, alteration or addition to the terms of the Contract, or to the work, or to the
specifications.

SIGNED, SEALED, AND DELIVERED this _____ day of _____.

(Individual Principals Sign Here)

Witnesses:

_____(SEAL)
_____(SEAL)
_____(SEAL)
_____(SEAL)

Attest:

(Corporate Principal Sign Here)

BY: _____

Attest:

(Surety Sign Here)

BY: _____

COUNTERSIGNED:

SECTION VIII

LABOR AND MATERIALS BOND

KNOW ALL MEN BY THESE PRESENTS, THAT WE _____ as Principal, and _____ as Surety, are held and firmly bound unto said Owner, hereinafter called the Obligee, in the penal sum of _____ Dollars (\$_____) lawful money of the United States, for the payment of which sum and truly to be made, we bind ourselves, our heirs, personal representatives, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, said Principal has entered into a certain Contract with said Obligee, dated _____ (hereinafter called the Contract) for **Art Center Site Improvements** and the specifications for said work shall be deemed a part hereof as fully as if set out herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH THAT if the said Principal and all subcontractors to whom any portion of the work in said Contract is sublet and all assignees of said Principal and of such subcontractors shall promptly make payments to all persons supplying him or them with labor, materials, or supplies for or in the prosecution of the work provided for in such Contract, or any amendment or extension of or addition to said Contract, and for the payment of reasonable attorney's fees incurred by the successful claimant or plaintiffs in suits or claims against the Contractor arising out of or in connection with the said Contract, then the above obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that this bond is subject to the following conditions and limitations.

(a) Any person, firm or corporation that has furnished labor, materials, or supplies for or in the prosecution of the work provided for in said Contract shall have a direct right to action against the Principal and Surety on this bond, which right of action shall be asserted in a proceeding, instituted in the County in which the work provided for in said Contract is to be performed or in any County in which said Principal or Surety does business. Such right of action shall be asserted in a proceeding instituted in the name of the claimant or claimants for his or their use and benefit against the Principal and Surety or either of them (but not later than one (1) year after the final settlement of said Contract falls due) in which action such claim or claims shall be adjusted and judgment rendered thereon.

(b) The Principal and Surety hereby designate and appoint _____, or his successor or representative as the agent of each of them to receive and accept services of process or other pleading issued, or filed in any proceeding instituted on this bond and hereby consent that such service shall be the same as personal service on the Principal and/or Surety.

(c) The Surety shall not be liable hereunder for any damages or compensation recoverable under Workmen's Compensation or Employer's Liability Statute.

(d) In no event shall the Surety be liable for a greater sum than the penalty of this bond, or subject to any suit, action or proceeding thereon that is instituted later than one year after the final settlement of said Contract.

(e) This bond is given pursuant to the terms of an Act of the Legislature of the State of Alabama approved February 8, 1935, entitled: "An Act to further provide for Bonds and Contractors on State and other public works and suits thereon".

(f) The full name and residence of each individual party to the bond must be inserted in the first paragraph.

(g) If the Principal is a partnership, the full name of all partners must be inserted in the first paragraph which must recite that they are the partners composing the partnership (to be named) and all partners must execute the bond as individuals.

(h) The State of Incorporation of each corporate party to bond must be inserted in the first paragraph and the bond must be executed under the Corporate Seal of each party attested by its secretary or other appropriate officer.

(i) The date of the bond must not be prior to the date of the Contract.

SIGNED, SEALED, AND DELIVERED this _____ day of _____.

(Individual Principals Sign Here)

Witnesses:

_____(SEAL)

_____(SEAL)

_____(SEAL)

_____(SEAL)

(Corporate Principal Sign Here)

Attest:

BY: _____

(Surety Sign Here)

Attest:

BY: _____

SECTION IX

CONTRACT FOR CONSTRUCTION

THIS CONTRACT, entered into this _____ day of _____, by **City of Orange Beach**, hereinafter called the Owner, Party of the First Part, and _____ a Corporation organized and existing under the laws of the State of _____, a Partnership consisting of _____ of the City of _____ in the State of _____, or _____, an individual, hereinafter called the Contractor, Party of the Second Part,

WITNESSETH: That the parties hereto do mutually agree as follows:

The Contractor shall furnish the materials and perform the work for the construction of:

Art Center Site Improvements

and other work, complete in place with all appurtenances, for the consideration of the unit prices set forth in the Contractor's proposal (estimated to total \$ _____) for the various items of work and in strict and entire conformity with the provisions of the Contract, the advertisement and proposal, the plans, general conditions, special provisions and supplemental specifications, and specifications prepared (or approved) and submitted by the Owner, copies of which are hereto attached, and which said plans and specifications and the advertisement and the proposal are hereby made a part of this agreement as fully and to the same effect as if the same has been set forth at length in the body of this Agreement.

The work shall be commenced within ten (10) days of the date specified in a work order to be issued to the Contractor by the Owner, or its authorized representative, and shall be completed within One Hundred Fifty (150) calendar days from and after the commencement date stipulated in said work order. It is mutually agreed between the parties hereto that time is the essence of this Contract, and in the event the construction of the Work is not completed within the time herein specified, it is agreed that from the compensation otherwise to be paid to the Contractor, the first party may retain as liquidated damages, \$500.00 for each calendar day beyond the required date of completion.

It is mutually agreed between the parties hereto that time is the essence of this Contract, and in the event the construction of the Work is not completed within the time herein specified, it is agreed that from the compensation otherwise to be paid to the Contractor, the first party may retain as liquidated damages, the amount specified in Section 108 of the State of Alabama Standard Specifications for Highway Construction for each calendar day beyond the required date of completion.

IN WITNESS WHEREOF, the parties hereto have executed this Contract as of the day and year first above written.

WITNESS:

NAME OF OWNER

BY: _____

Official Title

WITNESS:

NAME OF CONTRACTOR

BY: _____

Business Address

Telephone Number

Federal ID #

I, _____, certify that I am the _____ of the corporation named as Contractor herein that _____, who signed this Contract on behalf of the Contractor, was then _____ of said corporation: that said Contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporation by authority of its corporate powers.

(CORPORATE SEAL)

STATE OF ALABAMA)

COUNTY OF _____)

I, the undersigned authority, a Notary Public in and for said State and County, hereby certify that _____
_____ whose name as _____ of _____, is
signed to the foregoing instrument, and who is known to me, acknowledged before me on this day, that being
informed of the contents of the within instrument, he, as such officer and with full authority executed the same
voluntarily and as the act of said corporation.

Given under my hand and Official Seal this the _____ day of _____

NOTARY PUBLIC

MY COMMISSION EXPIRES

STATE OF ALABAMA)

COUNTY OF _____)

I, the undersigned authority, a Notary Public in and for said State and County, hereby certify that _____
_____ whose name as _____, of _____
_____, acknowledged before me on this day that, being informed of the contents of the within instrument he, in his
capacity as such, executed the same voluntarily on the day the same bears date.

Given under my hand and seal this _____ day of _____

NOTARY PUBLIC

MY COMMISSION EXPIRES

SECTION X

GENERAL CONDITIONS

1. CONTRACT AND CONTRACT DOCUMENTS:

The Plans, Specifications and Addenda, hereinafter enumerated in Paragraph 1 of the General Conditions shall form part of this Contract the provisions thereof shall be as binding upon the parties hereto as if they were herein fully set forth. The table of contents, titles, headings, running headlines and marginal notes contained herein and in the said documents are solely to facilitate reference to various provisions of the Contract Documents and in no way affect, limit or cast light on the interpretation of the provisions to which they refer.

Contents

1. Contract and Contract Documents
2. Additional Instructions and Detail Drawings
3. Shop Drawings
4. Materials, Services, and Facilities
5. Contractor's Title to Materials
6. Inspection and Testing of Materials
7. "Or Equal" Clause
8. Patents
9. Surveys, Permits and Regulations
10. Contractor's Obligations
11. Weather Conditions
12. Protection of Work and Property--Emergency
13. Reports, Records and Data
14. Supervision by Contractor
15. Changes in Work
16. Extras
17. Owner's Right to Perform Work
18. Time for Completion and Liquidated Damages
19. Correction of Work
20. Subsurface Conditions Found Different
21. Claims for Extra Cost
22. Right of Owner to Terminate Contract
23. Construction Schedule and Periodic Estimates
24. Payments to Contractor
25. Acceptance of Final Payment Constitutes Release
26. Payments by Contractor
27. Insurance
28. Contract Security
29. Additional or Substitute Bond
30. Assignments
31. Mutual Responsibility of Contractors
32. Separate Contract
33. Subcontracting
34. Engineer's Authority
35. Stated Allowances
36. Use of Premises and Removal of Debris
37. Lands and Rights-of-Way
38. General Guaranty
39. Conflicting Conditions
40. Notice and Service Thereof
41. Provisions Required by Law Deemed Inserted
42. Protection of Lives and Health
43. Other Prohibited Interests
44. Use and Occupancy Prior to Acceptance by Owner

- 45. Project Documentation
- 46. Suspension of Work
- 47. Underground Utilities and Services
- 48. Existing Utilities
- 49. Erosion Control
- 50. Plans and Specifications Furnished
- 51. Public Convenience
- 52. Equipment
- 53. Determination of Lines and Grades
- 54. Contract Close-Out

The following terms used in this contract are respectively defined as follows:

- (a) "Contractor": A person, firm or corporation with whom the contract is made by the Owner.
- (b) "Subcontractor": A person, firm or corporation supplying labor and materials or only labor for work at the site of the project for, and under separate contract or agreement with the Contractor.
- (c) "Work on at the project": Work to be performed at the location of the project, including the transportation of materials and supplies to or from the location of the project by employees of the Contractor and any Subcontractor.

2. **ADDITIONAL INSTRUCTION AND DETAIL DRAWINGS:**

The Contractor will be furnished additional instructions and detail drawings as necessary to carry out the work included in the contract. The additional drawings and instruction thus supplied to the Contractor will coordinate with the Contract Documents and will be so prepared that they can be reasonably interpreted as part thereof. The Contractor shall carry out the work in accordance with the additional detail drawing and instructions. The Contractor and the Engineer will prepare jointly (a) schedule, fixing the dates at which special detail drawings will be required, such drawings, if any, to be furnished by the Engineer in accordance with said schedule, and (b) a schedule fixing the respective dates for the submission of shop drawings, the beginning of manufacture, testing and installation of materials, supplies and equipment, and the completion of the various parts of the work; each such schedule to be subject to change from time to time in accordance with the progress of the work.

3. **SHOP DRAWINGS:**

The Contractor shall submit to the Engineer for review, five (5) copies of all Shop Drawings, plus the number of copies the Contractor wishes to have returned to him after the Engineer's review, collated according to the organization of the accepted schedule of Shop Drawings, which has written indication that the Contractor has satisfied their responsibilities under the Contract. All Shop Drawing submissions shall be identified on enclosure and show Project name and Project number. The information shown on the Shop Drawings will be complete with respect to all design criteria, materials, and similar data to enable the Engineer to review the information as required.

The Contractor shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar data prior to submission to the Engineer for review.

The Contractor shall furnish five (5) complete sets of the corrected copies of Shop Drawings including parts list, operation and maintenance manuals, lubrication charts and descriptive literature for all equipment. Also, any manufacturer's drawings of special materials required for the job shall be submitted to the Engineer for review prior to installation.

4. **MATERIALS, SERVICES AND FACILITIES:**

- (a) Materials to be supplied by the City of Orange Beach include:
None
- (b) It is understood that except as otherwise specifically stated in the Contract Documents, the Contractor shall provide all labor, tools, equipment, water, light, power, transportation, supervision, temporary construction of every nature, and all other services and facilities of every nature whatsoever necessary to execute, complete and deliver the work within the specified time.
- (c) Any work necessary to be performed after regular working hours, on Sundays or Legal Holidays, shall be performed without additional expense to the Owner.

5. **CONTRACTOR'S TITLE TO MATERIALS:**

No materials or supplies for the work shall be purchased by the Contractor or by any Subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. The Contractor warrants that he has good title to all materials and supplies used by him in the work, free from all liens, claims or encumbrances.

6. **INSPECTION AND TESTING OF MATERIALS:**

- (a) All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with accepted standards. The laboratory or inspection agency shall be selected by the Owner. The Owner will pay for all laboratory inspection service direct, and not as a part of the contract.
- (b) Materials of construction, particularly those upon which the strength and durability of the structure may depend, shall be subject to inspection and testing to establish conformance with specification and suitability for uses intended.

7. **"OR EQUAL" CLAUSE:**

Whenever a material, article or piece of equipment is identified on the plans or in the specifications by reference to manufacturer's or vendor's names, trade names, catalogue numbers, etc., it is intended merely to establish a standard; and, any materials, article, or equipment of other manufacturers and vendors which will perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, as determined by the Engineer is of equal substance and function. It shall not be purchased or installed by the Contractor without the Engineer's written approval.

8. **PATENTS:**

- (a) The Contractor shall hold and save the Owner and its officer, agents, servants, and employees harmless for liability of any nature or kind, including cost and expenses for, or on account of, any patented or unpatented invention, process, article or appliance manufactured or used in the performance of the contract, including its use by the Owner, unless otherwise specifically stipulated in the Contract Documents.
- (b) License or Royalty Fees: License and/or Royalty Fees for the use of a process which is authorized by the Owner of the project must be reasonable, and paid to the holder of the patent, or his authorized licensee, direct by the Owner and not by or through the Contractor.
- (c) If the Contractor uses any design, device or materials covered by letters, patent or copyright, he shall provide for such use by suitable agreement with the Owner of such patented or copyrighted design, device or material. It is mutually agreed and understood, that, without exception, the contract prices shall include all royalties or costs arising from the use of such design, device or materials, in any way involved in the work. The Contractor and/or his Sureties shall indemnify and save harmless the Owner of the project from any and all claims for infringement by reason of the use of such patented or

copyrighted design, device or materials or any trademark or copyright in connection with work agreed to be performed under this contract, and shall indemnify the Owner for any cost, expense or damage which it may be obliged to pay by reason of such infringement at any time during the prosecution of the work or after completion of the work.

9. **SURVEYS, PERMITS, AND REGULATIONS:**

Unless otherwise expressly provided for in the Specifications, the Owner will furnish to the Contractor centerline, clearing limits, and control points for project. The Contractor shall procure and pay all permits, licenses and approval necessary for the execution of his contract. Rules, orders, and regulations relating to performance of the work, the protection of adjacent property, and the maintenance of passageways, guard fences or other protective facilities.

Construction staking will be provided for only one time. Additional survey work will be provided by Contractor with no additional cost to the Owner. Contractor will be provided coordinates for said project upon request.

10. **CONTRACTOR'S OBLIGATIONS:**

The Contractor shall and will, in good workmanlike manner, do and perform all work and furnish all supplies and materials, machinery, equipment, facilities and means, except as herein otherwise expressly specified, necessary or proper to perform and complete all the work required by this contract, within the time herein specified, in accordance with the provisions of this contract and said specifications and in accordance with the plans and drawings covered by this contract any and all supplemental plans and drawings, and in the progress of the work. He shall furnish, erect, maintain, and remove such construction plant and such temporary works as may be required.

The Contractor shall observe, comply with and be subject to all terms, conditions, requirements and limitations of the contract and specifications, and shall do, carry on, and complete the entire work to the satisfaction of the Engineer and the Owner.

11. **WEATHER CONDITIONS:**

In the event of temporary suspension of work, or during inclement weather, or whenever the Engineer shall direct, the Contractor will, and will cause his subcontractors to protect carefully his and their work and materials against damage or injury from the weather. If in the opinion of the Engineer, any work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or any of his Subcontractors so to protect his work, such materials shall be removed and replaced at the expense of the Contractor.

12. **PROTECTION OF WORK AND PROPERTY—EMERGENCY:**

The Contractor shall at all times safely guard the Owner's property from injury or loss in connection with this contract. He shall at all times safely guard and protect his own work, and that of adjacent property from damage. The Contractor shall replace or make good any such damage, loss or injury unless such is caused directly by errors contained in the contract or by the Owner, or his duly authorized representatives.

In case of any emergency which threatens loss or injury of property, and/or safety of life, the Contractor will be allowed to act, without previous instructions from the Engineer, in a diligent manner. He shall notify the Engineer immediately thereafter. Any claim for compensation by the Contractor due to such extra work shall be promptly submitted to the Engineer for approval.

Where the Contractor has not taken action but has notified the Engineer of any emergency threatening injury to persons or damage to the work or any adjoining property, he shall act as instructed or authorized by the Engineer.

The amount of reimbursement claimed by the Contractor on account of any emergency action shall be determined in the manner provided in Paragraph 15 of the General Conditions.

13. **REPORTS, RECORDS, AND DATA:**

The Contractor shall submit to the Owner such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data as the Owner may request concerning work performed or to be performed under this contract.

14. **SUPERVISION BY CONTRACTOR:**

At the site of the work the Contractor shall employ a construction superintendent or foreman who shall have full authority to act for the Contractor. It is understood that such representative shall be acceptable to the Engineer and shall be one who can be continued in that capacity for the particular job involved unless he ceases to be on the Contractor's payroll.

15. **CHANGES IN WORK:**

No changes in the work covered by the approved Contract Documents shall be made without having prior written approval of the Owner. Charges or credits for the work covered by the approved change shall be determined by one or more, or a combination of the following methods:

- (a) Unit bid prices previously approved.
- (b) An agreed lump sum.
- (c) The actual cost of:
 1. Labor, including foremen;
 2. Materials entering permanently into the work;
 3. The ownership or rental cost of construction plant and equipment during the time of use on the extra work;
 4. Power and consumable supplies for the operation of power equipment;
 5. Insurance; and
 6. Social Security and old age and unemployment contribution. To the cost under (c) there shall be added a fixed fee to be agreed upon but not to exceed fifteen (15%) percent of the actual cost of the work. The fee shall be compensation to cover the cost of supervision, overhead, bond, profit and any other general expenses.

16. **EXTRAS:**

Without invalidating the contract, the Owner may order extra work or make changes by altering, adding to or deducting from the work, the contract sum being adjusted accordingly and the consent of the Surety being first obtained where necessary or desirable. All the work of the kind bid upon shall be paid for at the price stipulated in the proposal, and no claims for any extra work or materials, shall be allowed unless the work is ordered in writing by the Owner or its Engineer, acting officially for the Owner, and the price is stated in such order.

17. **OWNER'S RIGHT TO PERFORM WORK:**

It is understood that the Owner may delete any and/or all of the items listed above and the Contractor agrees to construct the remaining items at the bid price for each item.

18. **TIME FOR COMPLETION AND LIQUIDATED DAMAGES:**

It is hereby understood and mutually agreed, by and between the Contractor and the Owner, that the date of beginning and the time for completion as specified in the contract of the work to be done hereunder are ESSENTIAL CONDITIONS of this contract; and it is further mutually understood and agreed that the work embraced in his contract shall be commenced on a date to be specified in the "Notice to Proceed".

The Contractor agrees that said work shall be prosecuted regularly, diligently, and uninterruptedly at such rate of progress as will insure full completion thereof within the time specified. It is expressly understood and agreed, by and between the Contractor and the Owner, that the time for the completion of the work described herein is a reasonable time for the completion of the same, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.

If the said Contractor shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as a part of his consideration for the awarding of this contract, to pay to the Owner the amount specified in the contract, not as a penalty but as liquidated damages for such breach of contract as hereinafter set forth, for each and every calendar day that the Contractor shall be in default after the time stipulated in the contract for completing the work.

It is mutually agreed between the parties hereto that time is the essence of this Contract, and in the event the construction of the Work is not completed within the time herein specified, it is agreed that from the compensation otherwise to be paid to the Contractor, the second party may retain as liquidated damages, the amount specified in Section 108 of the State of Alabama Standard Specifications for Highway Construction, for each calendar day beyond the required date of completion or \$500 dollars, whichever is greater.

It is further agreed that time is of the essence of each and every portion of this contract and of the specifications wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the contract an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this contract. Provided that the Contractor shall not be charged with liquidated damages or any excess cost when the Owner determines that the Contractor is without fault and the Contractor's reasons for the time extension are acceptable to the Owner; Provided, further, that the Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due:

- (a) To any preference, priority or allocation order duly issued by the Government;
- (b) To unforeseeable cause beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God, or of the public enemy, acts of the Owner, acts of another Contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and severe weather; and
- (c) To any delays of Subcontractors or suppliers occasioned by any of the causes specified in subsections (a) and (b) of this article.

Provided, further, that the Contractor shall, within five (5) days from the beginning of such delay, unless the Owner shall grant a further period of time prior to the date of final settlement of the contract, notify the Owner, in writing, of the causes of the delay, who shall ascertain the facts and extent of the delay and notify the Contractor within a reasonable time of its decision in the matter.

19. **CORRECTION OF WORK:**

All work, all materials, whether incorporated in the work or not, all processes of manufacture, and all methods of construction shall be at all times and places subject to the inspection of the Engineer who shall be the final judge of the quality and suitability of the work, materials, processes of manufacture, and methods of construction for the purposes for which they are used. Should they fail to meet his approval they shall be forthwith reconstructed, made good, replaced and/or corrected, as the case may be, by the Contractor at his own expense. Rejected materials shall immediately be removed from the site. If in the opinion of the Engineer, it is undesirable to replace any defective or damaged materials or to reconstruct or correct any portion of the work injured or not performed in accordance with the Contract Documents, the compensation to be paid the Contractor hereunder shall be reduced by such amount as in the judgment of the Engineer shall be equitable.

20. **SUBSURFACE CONDITIONS FOUND DIFFERENT:**

Should the Contractor encounter sub-surface and/or latent conditions at the site materially differing from those shown on the Plans or indicated in the Specifications, he shall immediately give notice to the Engineer of such conditions before they are disturbed. The Engineer will thereupon promptly investigate the conditions, and if he finds that they materially differ from those shown on the Plans or indicated in the Specifications, he will at once make such changes in the Plans and/or Specifications as he may find necessary, any increase or decrease of cost resulting from such changes to be adjusted in the manner provided in Paragraph 15 of the General Conditions.

21. **CLAIMS FOR EXTRA COST:**

No claim for extra work or cost shall be allowed unless the same was done in pursuance of a written order of the Engineer approved by the Owner, as aforesaid, and the claim presented with the first estimate after the changed or extra work is done. When work is performed under the terms of subparagraph 15(c) of the General Conditions, the Contractor shall furnish satisfactory bills, payrolls and vouchers covering all items of cost and when requested by the Owner, give the Owner access to accounts relating thereto.

22. **RIGHT OF THE OWNER TO TERMINATE CONTRACT:**

In the event that any of the provisions of this contract are violated by the Contractor, or by any of his subcontractors, the Owner may serve written notice upon the Contractor and the Surety of its intention to terminate the contract, such notices to contain the reasons for such intention to terminate the contract, and unless within three (3) days after the serving of such notice upon the Contractor, such violation or delay shall cease and satisfactory arrangement of correction be made, the contract shall upon the expiration of said three (3) days, cease and terminate. In the event of any such termination, the Owner shall immediately serve notice thereof upon the Surety and the Contractor and the Surety shall have the right to take over and perform the contract; Provided, however, that if the Surety does not commence performance thereof within five (5) days from the mailing to such Surety of notice of termination, the Owner may take over the work and prosecute the same to completion by contract or by force account for the account and at the expense of the Contractor and the Contractor and his Surety shall be liable to the Owner for any excess cost occasioned the Owner thereby, and in such event the Owner may take possession of and utilize in completing the work, such materials, appliances, and plant as may be on the site of the work and necessary therefor.

23. **CONSTRUCTION SCHEDULE AND PERIODIC ESTIMATES:**

Immediately after execution and delivery of the contract, and before the first partial payment is made, the Contractor shall deliver to the Owner an estimated construction progress schedule in form satisfactory to the Owner, showing the proposed dates of commencement and completion of each of the various subdivisions of work required under the Contract Documents and the anticipated amount of each monthly payment that will be come due the Contractor in accordance with the progress schedule. The Contractor shall also furnish on forms to be supplied by the Owner (a) detailed estimate giving a complete breakdown of the contract price and (b) periodic itemized estimates of work done for the purpose of making partial payment thereon. The costs employed in making up any of these schedules will be used only for determining the basis of partial payments and will not be considered as fixing a basis for additions to or deductions from the contract price.

24. **PAYMENTS TO CONTRACTOR:**

- (a) Not later than the 15th day of each calendar month the Owner shall make a progress payment to the Contractor on the basis of a duly certified and approved estimate of the work performed during the preceding calendar month under this contract, but to insure the proper performance of this contract, the Owner shall retain five (5%) percent of the amount of each estimate until final completion and acceptance of all work covered by this contract: Provided, that the Contractor shall submit his estimate not later than the first day of the month: Provided, further, that the Owner at any time after fifty (50%) percent of the work has been completed, if it finds that satisfactory progress is being made, may make any of the remaining progress payments in full; Provided, further, that on completion and acceptance of each separate building, public work, or other division of the contract,

on which the price is stated separately in the contract, payment may be made in full, including retained percentages thereon, less authorized deductions.

- (b) In preparing estimates the material delivered on the site and preparatory work done may be taken into consideration.
- (c) All material and work covered by partial payments made shall thereupon become the sole property of the Owner, but this provision shall not be construed as relieving the Contractor from the sole responsibility for the care and protection of materials and work upon which payments have been made or the restoration of any damaged work, or as a waiver of the right of the Owner to require the fulfillment of all of the terms of the contract.
- (d) **Owner's Right to Withhold Certain Amounts and Make Application Thereof:** The Contractor agrees that he will indemnify and save the Owner harmless from all claims growing out of the lawful demands of subcontractors, laborers, workmen, mechanics, material men, and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in the furtherance of the performance of this contract. The Contractor shall, at the Owner's request, furnish satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged, or waived. If the Contractor fails so to do, then the Owner may, after having served written notice on the said Contractor, either pay unpaid bills, of which the Owner has written notice, direct or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the contractor shall be resumed, in accordance with the terms of this contract, but in no event shall the provisions of this sentence be construed to impose any obligations upon the Owner to either the Contractor or his Surety. In paying any unpaid bills of the Contractor, the Owner shall be deemed the agent of the Contractor, and any payment so made by the Owner shall be considered as a payment made under the contract by the Owner to the Contractor and the Owner shall not be liable to the Contractor for any such payments made in good faith.

25. ACCEPTANCE OF FINAL PAYMENT CONSTITUTES RELEASE:

The acceptance by the Contractor of final payment shall be and shall operate as a release to the Owner of all claims and all liability to the Contractor for all things done or furnished in connection with this work and for every act and neglect of the Owner and other relating to or arising out of this work. No payment, however, final or otherwise, shall operate to release the Contractor or his sureties from any obligations under this contract or the Performance and Payment Bond.

26. PAYMENTS BY CONTRACTOR:

The Contractor shall pay (a) for all transportation and utility services not later than the 20th day of the calendar month following that in which services are rendered, (b) for all materials, tools, and other expendable equipment to the extent of ninety (90%) percent of the cost thereof, not later than the 20th day of the calendar month following that in which such materials, tools, and equipment are delivered at the site of the project and the balance of the cost thereof, not later than the 30th day following the completion of that party of the work in or on which such materials, tools, and equipment are incorporated or used, and (c) to each of his subcontractors, not later than the 5th day following each payment to the Contractor, the respective amounts allowed the Contractor on account of the work performed by his subcontractors to the extent of each subcontractor's interest therein.

27. INSURANCE:

The Contractor shall not commence work under this contract until he has obtained all the insurance required under this paragraph and such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence work on his subcontract until the insurance required of the subcontractor has been so obtained and approved.

- (a) Compensation Insurance: The Contractor shall procure and shall maintain during the life of this contract Workmen's Compensation Insurance as required by applicable State or territorial law for all of his employees to be engaged in work at the site of the project under this contract and, in case of any such work sublet, the Contractor shall require the subcontractor similarly to provide Workmen's Compensation Insurance for all of the latter's employees to be engaged in such work unless such employees are covered by the protection afforded by the Contractor's Workmen's Compensation Insurance. In case any class of employees engaged in hazardous work on the project under this contract is not protected under the Workmen's Compensation Statute, the Contractor shall provide and shall cause each subcontractor to provide adequate employer's liability insurance for the protection of such of his employees as are not otherwise protected.
- (b) Contractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance: The Contractor shall procure and shall maintain during the life of this contract Contractor's Public Liability Insurance, Contractor's Property Damage Insurance and Vehicle Liability Insurance in the amounts specified in the Supplemental General Conditions. (c) Subcontractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance: The Contractor shall either (1) require each of his subcontractors to procure and to maintain during the life of his subcontract, Subcontractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance of the type and in the amounts specified in the Supplemental General Conditions specified in subparagraph (b) hereof or, (2) insure the activities of his policy, specified in subparagraph (b) hereof.
- (c) Scope of Insurance and Special Hazards: The insurance required under subparagraphs (b) and (c) hereof shall provide adequate protection for the Contractor and his subcontractors, respectively, against damage claims which may arise from operations under this contract, whether such operations be by the insured or by anyone directly or indirectly employed by him and, also against any of the special hazards which may be encountered in the performance of this contract as enumerated in the Supplemental General Conditions.
- (d) Builder's Risk Insurance (Fire and Extended Coverage): Until the project is completed and accepted by the Owner, the Owner, or Contractor (at the Owner's option as indicated in the Supplemental General Conditions), is required to maintain Builder's Risk Insurance (fire and extended coverage) on a 100 percent completed value basis on the insurable portion of the project for the benefit of the Owner, the Contractor, subcontractors as their interest may appear. The Contractor shall not include any costs for Builder's Risk Insurance (fire and extended coverage premiums during construction unless the Contractor is required to provide such insurance; however, this provision shall not release the Contractor from his obligation to complete, according to plans and specifications, the project covered by the contract, and the Contractor and his Surety shall be obligated to full performance of the Contractor's undertaking.
- (e) Proof of Carriage of Insurance: The Contractor shall furnish the Owner with certificates showing the type, amount, class of operations covered, effective dates and date of expiration of policies. Such certificates shall also contain substantially the following statement: "The insurance covered by this certificate will not be canceled or materially altered except after fifteen (15) days written notice has been received by the Owner."

28. CONTRACT SECURITY:

The Contractor shall furnish a performance bond in an amount at least equal to one hundred (100%) percent of the contract prices as security for the faithful performance of this contract and also a payment bond in an amount not less than one hundred (100%) percent of the contract price or in a penal sum not less than that prescribed by State, territorial or local law, as security for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract. The performance bond and the payment bond may be in one or separate instruments in accordance with local law.

29. **ADDITIONAL OR SUBSTITUTE BOND:**

If at any time the Owner, for justifiable cause, shall be or become dissatisfied with any surety or sureties, and then upon the Performance or Payment Bonds, the Contractor shall within five (5) days after notice from the Owner so to do, substitute an acceptable bond (or bonds) in such form and sum and signed by such other surety or sureties as may be satisfactory to the Owner. The premiums on such bond shall be paid by the Contractor. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished such an acceptable bond to the Owner.

30. **ASSIGNMENTS:**

The Contractor shall not assign the whole or any part of this contract or any moneys due or become due hereunder without written consent of the Owner. In case the Contractor assigns all or part of any moneys due or to become due under this contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any moneys due or to become due to the Contractor shall be subject to prior claims of all persons, firms and corporations of services rendered or materials supplied for the performance of the work called for in this contract.

31. **MUTUAL RESPONSIBILITY OF CONTRACTORS:**

If, through acts of neglect on the part of the Contractor, any other Contractor or any subcontractor shall suffer loss or damage on the work, the Contractor agrees to settle with such other Contractor or subcontractor by agreement or arbitration if such other Contractor or subcontractors will so settle. If such other Contractor or subcontractor shall assert any claim against the Owner on account of any damage alleged to have been sustained, the Owner shall notify the Contractor, who shall indemnify and save harmless the Owner against any such claim.

32. **SEPARATE CONTRACT:**

The Contractor shall coordinate his operations with those of other Contractors. Cooperation will be required in the arrangement for the storage of materials and in the detailed execution of the work. The Contractor, including his subcontractors, shall keep informed of the progress and the detail work of other Contractors and shall notify the Engineer immediately of lack of progress or defective workmanship on the part of other Contractors. Failure of a contractor to keep informed of the work progressing on the site and failure to give notice of lack of progress or defective workmanship by others shall be construed as acceptance by him of the status of the work as being satisfactory for proper coordination with his own work.

33. **SUBCONTRACTING:**

- (a) The Contractor may utilize the services of specialty subcontractors only on those parts of the work which, under normal contracting practices, are performed by specialty subcontractors. The amount of work performed by a subcontractor shall be limited to fifty (50%) percent of the Contract price, unless authorized by the Owner and/or Engineer.
- (b) The Contractor shall not award any work to any subcontractor without prior written approval of the Owner, which approval will not be given until the Contractor submits to the Owner a written statement concerning the proposed award to the subcontractor, which statement shall contain such information as the Owner may require.
- (c) The Contractor shall be as fully responsible to the Owner for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.
- (d) The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the terms of the General Conditions and other contract documents insofar as applicable to the work of subcontractors and to give the Contractor the same power as regards terminating any subcontract that the Owner may exercise over the Contractor under any provision of the contract documents.

- (e) Nothing contained in this contract shall create any contractual relation between any subcontractor and the Owner.

34. **ENGINEER'S AUTHORITY:**

The Engineer shall give all orders and directions contemplated under this contract and specifications, relative to the execution of the work. The Engineer shall determine the amount, quality, acceptability, and fitness of the several kinds of work and materials which are to be paid for under this contract and shall decide all questions which may arise in relation to said work and the construction thereof. The Engineer's estimates and decisions shall be final and conclusive, except as herein otherwise expressly provided. In case any question shall arise between the parties hereto relative to said contract or specifications, the determination or decision of the Engineer's shall be a condition precedent to the right of the Contractor to receive any money or payment for work under this contract affected in any manner or to any extent by such question.

The Engineer shall decide the meaning and intent of any portion of the specifications and of any plans or drawings where the same may be found obscure or be in dispute. Any differences or conflicts in regard to their work which may arise between the Contractor under this contract and other Contractors performing work for the Owner shall be adjusted and determined by the Engineer.

35. **STATED ALLOWANCES:**

The Contractor shall include in his proposal the cash allowances stated in the Supplemental General Conditions. The Contractor shall purchase the "Allowed Materials" as directed by the Owner on the basis of the lowest and best bid of at least three competitive bids. If the actual price for purchasing the "allowed Materials" is more or less than the "Cash Allowance", the contract price shall be adjusted accordingly. The adjustment in contract price shall be made on the basis of the purchase price without additional charges for overhead, profit, insurance or any other incidental expenses. The cost of installation of the "Allowed Materials" shall be included in the applicable sections of the Contract Specifications covering this work.

36. **USE OF PREMISES AND REMOVAL OF DEBRIS:**

The Contractor expressly undertakes at his own expense:

- (a) to take every precaution against injuries to persons or damage to property;
- (b) to store his apparatus, materials, supplies and equipment in such orderly fashion at the site of the work as will not unduly interfere with the progress of his work or the work of any other contractors;
- (c) to place upon the work or any part thereof only such loads as are consistent with the safety of that portion of the work; materials, and debris caused by his operations, to the end that at all times the site of the work shall present a neat, orderly and workmanlike appearance;
- (d) before final payment to remove all surplus material, false-work, temporary structures, including foundations thereof, plant of any description and debris of every nature resulting from his operations, and to put the site in a neat, orderly condition;
- (e) to effect all cutting, fitting or patching of his work required to make the same to conform to the plans and specifications and, except with the consent of the Engineer, not to cut or otherwise alter the work of any other Contractor.

37. **LANDS AND RIGHTS-OF-WAY:**

Prior to the start of construction, the Owner shall obtain all lands and rights-of-way necessary for the carrying out and completion of work to be performed under this contract.

38. **GENERAL GUARANTY:**

Neither the final certificate of payment nor any provision in the Contract Documents, nor partial or entire occupancy of the premises by the Owner, shall constitute an acceptance of work not done in accordance with the Contract Documents or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall remedy any defects in the work and pay for any damage to other work resulting therefrom, which shall appear within a period of one year from the date of final acceptance of the work unless a longer period is specified. The Owner will give notice of observed defects with reasonable promptness.

39. **CONFLICTING CONDITIONS:**

Order of precedence of Sections of the Contract Documents shall be in descending order as follows: CONTRACT, GENERAL CONDITIONS, SPECIAL PROVISIONS, all other Sections. Any provision in any Section which may be in conflict or inconsistent with any provision in any Section of greater precedence shall be void to the extent of such conflict or inconsistency.

40. **NOTICE AND SERVICE THEREOF:**

Any notice to any Contractor from the Owner relative to any part of this contract shall be in writing and considered delivered and the service thereof completed, when said notice is posted, by certified or registered mail to the said Contractor at his last given address, or delivered in person to the said Contractor or his authorized representative on the work.

41. **PROVISIONS REQUIRED BY LAW DEEMED INSERTED:**

Each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein and the contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party the contract shall forthwith be physically amended to make such insertion or correction.

42. **PROTECTION OF LIVES AND HEALTH:**

"The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his prosecution of the work. The safety provisions of applicable laws and building and construction codes, in addition to specific safety and health regulations described by Chapter XIII, Bureau of Labor Standards, Department of Labor, Part 1518, Safety and Health Regulations for Construction, as outlined in the Federal Register, Volume 36, No. 75, Saturday, April 17, 1971. Title 29 - LABOR, shall be observed and the Contractor shall take or cause to be taken, such additional safety and health measures as the Contracting Authority may determine to be reasonably necessary."

43. **OTHER PROHIBITED INTERESTS:**

No official of the Owner who is authorized in such capacity and on behalf of the Owner to negotiate, make, accept or approve, or to take part in negotiating, making, accepting or approving any architectural, engineering, inspection, construction or material supply contracts or any subcontract in connection with the construction of the project, shall become directly or indirectly interested personally in this contract or in any part hereof. No officer, employee, architect, attorney, engineer or inspector of or for the Owner who is authorized in such capacity and on behalf of the Owner to exercise any legislative, executive, supervisory or other similar functions in connection with the construction of the project, shall become directly or indirectly interested personally in this contract or in any part thereof, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the project.

44. **USE AND OCCUPANCY PRIOR TO ACCEPTANCE BY OWNER:**

The Contractor agrees to the use and occupancy of a portion or unit of the project before formal acceptance by the Owner, provided the Owner:

- (a) Secures written consent of the Contractor except in the event, in the opinion of the Engineer, the Contractor is chargeable with unwarranted delay in final cleanup of punch list items or other contract requirements.
- (b) Secures endorsement from the insurance-carrier and consent of the surety permitting occupancy of the building or use of the project during the remaining period of construction, or,
- (c) When the project consists of more than one building, and one of the buildings is occupied, secures permanent fire and extended coverage insurance, including a permit to complete construction. Consent of the surety must also be obtained.

45. **PROJECT DOCUMENTATION:**

- (a) General: Prior to start of construction, the Project right-of-way or easement shall be documented by the use of photographs or videotapes. Pictures (photo or video), in color, shall be taken at 100 feet on centers and shall be taken along the centerline of the Project looking up station. At least one station marker shall be visible for identification purposes and station markers shall be set by the Contractor. During the course of the documentation, any features or items of interest or importance which may be encountered shall be photographed or videotaped. Prints or tapes shall be delivered to the Engineer within one week after they are made. The Contractor will not be paid any portion of a partial payment request until prints or tapes are delivered to the Engineer's office.
- (b) Photographs: Clear, legible photographs shall be taken by a skilled technician using a wide angle lens. Each photograph shall be identified on the back with Project number, location, date and time of day that photograph was taken. One color print approximately 4" x 6" and the negative shall be delivered to the Engineer.
- (c) Videotapes: The purpose of the videotape recordings shall be a supply of continuous visual and audio record of problem areas, items, and features found within any particular area. This videotape record may be supplemented with photographs to exactly identify and locate specific bad features or items.

The videotape recordings shall be capable of recording and reproducing a picture having not less than 500 lines of resolution. The videotape recorder shall be one on which both sound and video information can be recorded utilizing a VHS video cassette system. The videotape recording shall be made on magnetic tape which shall produce a visual image equal to or better than the quality of the picture on a television monitor. The replay of the recorder video information, when reviewed on a monitor/receiver, shall be free of electrical interference and shall produce clear, stable images. To ascertain that the equipment to be used in this Work meets the stated minimum requirements, a videotape of a suitable test pattern will be required prior to initiation of Work. The audio portion of the composite signal shall be sufficiently free of electrical interference and background noise to provide an oral report that is clear and completely and easily discernible. The audio portion of the tape report shall be recorded by the operating technician on the audio-video tapes as they are being produced and shall include the location or identification of the section being viewed, the station-to-station direction of travel, the distance traveled on the specific run, and any problems encountered.

Videotape recordings shall be enclosed in a vinyl plastic container which shall clearly indicate the date the tape was taken and the designated section(s) of the Project contained on the tape.

There shall be no separate payment for photographic and/or videotape work.

46. **SUSPENSION OF WORK:**

Should the Owner be prevented or enjoined from proceeding with work either before or after the start of construction by reason of any litigation or other reason beyond the control of the Owner, the Contractor shall not be entitled to make or assert claim for damage by reason of said delay; but time for completion of the work will be extended to such reasonable time as the Owner may determine will compensate for time lost by such delay with such determination to be set forth in writing.

47. **UNDERGROUND UTILITIES AND SERVICES:**

The plans show certain features of the topography and certain underground utilities, but they do not propose to show in complete detail all such lines or obstructions. Such topography and notes on the plans were inserted from records available and are for the contractor's convenience, and shall not be used as a basis for claims or extra compensation.

Minor obstructions are not shown on the plans. Their presence, and the required removal and the resetting thereof shall be considered incidental to the overall project and the cost for the work noted above shall be included in the overall bid price for the project (no separate payment).

Mailboxes, signs and other minor obstructions are not shown on the plans. Their presence, and the required removal and the resetting thereof shall be considered incidental to the overall project and the cost for the work noted above shall be included in the overall bid price for the project (no separate payment).

48. **EXISTING UTILITIES:**

The existing utilities as shown on the plans are for the Contractor's benefit. These utilities have been plotted from the best available records. However, failure to show any utility on the construction plans does not justify additional payment to the Contractor if said utility is damaged. The Contractor must notify the utility companies involved prior to starting construction and shall make every effort not to damage any utilities. If utilities are damaged by the Contractor, the Contractor must pay all expenses incurred in the repair at no cost to the Owner or Engineer.

49. **EROSION CONTROL:**

Immediately prior to any clearing and grubbing or any excavation which could disturb the soils, the Contractor shall install the erosion control items in locations indicated on the construction plans.

The Contractor will be responsible for identifying and installing erosion control in areas where erosion may be encountered during construction of the project. The Contractor shall take all necessary precautions to insure that the construction of the project and the erosion/sediment from the project are adequately controlled and do not damage streams or adjacent property.

The erosion control items installed shall be maintained by the Contractor throughout the course of the project.

50. **PLANS AND SPECIFICATIONS FURNISHED:**

The Engineer shall provide the Contractor with three (3) sets of construction plans and specifications. Any additional plans and specifications required by the Contractor must be paid for by the Contractor.

51. **PUBLIC CONVENIENCE:**

No attempt is made to restrict work hours of the Contractor's operations, but he is reminded that it will be necessary to arrange his work schedule to provide the least inconvenience to the public and individual residents.

The Contractor shall take extra precaution to insure that traffic is protected by the use of, but not limited to, flashing signs and barrels.

No direct payment will be made for any of the work described in this section.

52. **EQUIPMENT:**

Choice of equipment for excavation or other project work shall be the responsibility of the Contractor, however, any equipment that results in waste of material, inaccurate work, or otherwise proves objectionable shall be replaced as directed by the Engineer at no additional cost to the Owner.

53. **DETERMINATION OF LINES AND GRADES:**

The Engineer will set one set of construction stakes for the Contractor establishing all lines and grades necessary for the proper prosecution of the work. The location, alignment and elevation of all parts of the work will be established by the Engineer, but the Contractor shall assume full responsibility for construction to alignment, grade, and dimensions indicated in the plans. These stakes shall constitute the field control by which the Contractor shall govern and execute his work.

54. **CONTRACT CLOSE-OUT:**

Subsequent to the final inspection of this project by the Engineer, the following requirements must be satisfied by the Contractor before final payment can be made.

- a. The Contractor must publicly advertise the NOTICE OF COMPLETION furnished by the Engineer a minimum of once a week for four consecutive weeks.
- b. The Contractor must execute copies of CONTRACTOR'S AFFIDAVIT OF PAYMENT OF CLAIMS AND DEBTS on the form furnished by the Engineer.
- c. The Contractor must have his surety execute copies of CONSENT OF SURETY TO FINAL PAYMENT on the form furnished by the Engineer.
- d. The Contractor must furnish a letter on his letterhead acknowledging that acceptance of final payment by the Contractor constitutes a waiver of all claims, present or future, in connection with this project as per Item 25 of this section.
- e. If any purchase items have been incorporated in the work, the Contractor must furnish a letter on his letterhead assigning those warranties to the OWNER. Copies of said warranties shall be bound in one binder and submitted along with the letter assignment.
- f. The Contractor must provide one complete set of "as built" covering all utility routing, structural, mechanical, and electrical aspects of the work, including wiring schematics.

SECTION XI

SPECIAL PROVISIONS

1. SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION:

The Contractor shall comply with the Department of Labor Safety and Health Regulations for construction promulgated under the Occupational Safety and Health Act of 1970 (PL-596) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL-91-54).

The Contractor alone shall be responsible for the safety, efficiency, and adequacy of his plant, appliances, and methods, and for any damage which may result from their failure or their improper construction, maintenance, or operations.

2. DEPARTMENT OF TRANSPORTATION SPECIFICATIONS:

It is the intent of the Engineer to construct the within described improvements in accordance with the State of Alabama Highway Department Standard Specifications for Highway Construction, most current edition. Said specifications shall be hereafter referred to as the Highway Department Specifications.

All provisions enumerated in the Highway Department Specifications shall be complied with, except as otherwise revised herein. Where certain modifications in said specifications appear in these specifications, only the modifications apply; otherwise, the standard specifications apply.

In said specifications where the words State of Alabama, Governor, State Highway Department, Director, etc., appear, substitute the Owner. Where the word Engineer appears, it shall mean Sawgrass Consulting, LLC. Where the words Testing Laboratory and/or Laboratory appear, it shall mean the particular Testing Laboratory retained by the Owner for this work.

A. PARAGRAPH 105.13 MAINTENANCE OF THE WORK:

Add to sub-paragraph (a), first paragraph, after "at all times".

And shall maintain it in that condition for forty-five (45) days after the final construction inspection. The Contractor will meet and be subject to all of the terms, requirements, and conditions of the following provision which is hereby incorporated in and made a part of this Contract, that is:

"The Engineer will maintain strict observation of the project construction, and will in this capacity prepare and submit to the Contractor a weekly time report showing the days worked and charged against the Contractor for the previous week and the number of days remaining on the project based on the Contract. Such report to be dated as of the Monday of the week following the week which is being reported and to be posted by regular mail to the Contractor on the same date. If the Contractor has not received this report by Wednesday, it shall be his responsibility to check with the Engineer and determine why the report was not received, and additional time will be allowed to cover any legitimate delay in such delivery with respect to the time limitations hereinafter set out, provided such delays are reported to the Owner by the Contractor and approval obtained for such extension of time. If the Contractor has any disagreement over the days worked and charged on any such weekly report, these differences must be resolved immediately. If such resolution is not accomplished between the Engineer and the Contractor within ten days following the date of such written report, this fact shall be reported by the Engineer to the Owner in writing, whereupon the Owner will intervene and decide the dispute by decision of the Owner, and this decision shall be accepted by and be binding on both the Owner and the Contractor. If the Contractor has not informed the Engineer in writing of any disagreement he may have with any weekly days worked charges made by the Engineer within ten days of the date of the weekly report in question, then such report shall be deemed accepted by the Contractor and no subsequent complaint by him will be allowed. Further, if the Engineer fails for a period of twenty days after the date of any such weekly report to inform the Owner in writing of any unresolved disagreement with the Contractor,

such report will be taken by the Owner as accepted, provided however, that if there is in fact any unresolved disagreement within twenty days of the date of such report, then the dispute will be held settled in favor of the Contractor's position. This time report will be submitted on a form similar to that used by the State Department of Transportation as approved by the Owner. Where work has been stopped by reasons beyond the Contractor's control, such as weather, unacquired right of way, utility obstructions, etc., it will be the duty of the Engineer to notify the Contractor when work can be resumed, whereupon it will be the duty of the Contractor to notify the Engineer of the time and location he will resume work on the project.

3. **DEPARTMENT OF TRANSPORTATION DRAWINGS:**

Where State of Alabama Department of Transportation Alabama Standard Drawings are applicable for the work required, they shall be considered as part of the plans, and copies of required drawings will be afforded the Contractor for construction purposes.

4. **PROGRESS REPORTS:**

The Contractor shall provide a weekly progress report to the Engineer. This report should indicate the work performed and the materials used during the previous week's operation. Failure to provide a progress report will be justification for the Engineer to withhold payment to the Contractor until said report is received.

5. **HORIZONTAL AND VERTICAL CONTROL:**

Unless otherwise expressly provided for in the Specifications, the Owner will furnish to the Contractor centerline, clearing limits, and control points for project. The Contractor shall procure and pay all permits, licenses and approval necessary for the execution of his contract. Rules, orders, and regulations relating to performance of the work, the protection of adjacent property, and the maintenance of passageways, guard fences or other protective facilities.

Construction staking will be provided for only one time. Additional survey work will be provided by Contractor with no additional cost to the Owner. Contractor will be provided coordinates for said project upon request.

6. **PROJECT SITE:**

The Contractor shall keep the project site clean at all times. No loose dirt or stockpiles shall be left in areas other than those areas approved by the Engineer. The Engineer may require the Contractor to clean up any portion of the Project as he deems necessary.

7. **MATERIALS:**

The Contractor agrees to comply with, and to require the compliance of all subcontractors with the provisions of Act #876 of the Legislature of Alabama, adopted on September 8, 1961, requiring purchase of materials and supplies and products for the project which are manufactured, mined, processed, or otherwise produced in the United States or its territories if the same are available at reasonable prices; and the Contractor further agrees and stipulates to pay to the Owner a sum to be determined and fixed by the Owner in an amount not less than five hundred (\$500.00) dollars nor more than twenty (20%) percent of the gross amount of the Contract in the event he or any subcontractor breach this agreement to use domestic products.

8. **ELECTRICAL AND TELEPHONE SERVICES:**

Overhead electrical cables are located within the construction limits. It shall be the Contractor's responsibility to coordinate with the utility for any required temporary relocation of the overhead cables.

9. **BASIS OF PAYMENT AND METHOD OF MEASURE:**

A. MATERIAL SUPPLIED BY CITY

None

B. ALL ITEMS

Alabama Highway Department Standard Specifications for Highway Construction, most current edition.

C. TRAFFIC CONTROL SCHEME

The permit drawings and associated documentation for the construction of the Turn-out for access to Highway 180 (Canal Road) have been approved by the Alabama Department of Transportation. The Contractor will be responsible for filing the actual Permit Application BM-111 and MB-07 forms and providing the Bond required for working on the State ROW. The unit price bid for the Traffic Control Scheme shall include the cost for obtaining the Bond and filing the stated forms. Sawgrass will assist with this effort by providing the approved drawings, checklists, etc..

SECTION XII

SUPPLEMENTAL SPECIFICATIONS

1.0 SPECIAL CONSTRUCTION CONSIDERATIONS

GRASSPAVE2 POROUS PAVEMENT SYSTEM

1.1 SYSTEM DESCRIPTION

- A. The Grasspave2 porous pavement system provides vehicular and pedestrian load support for grass areas, while protecting grass roots from harmful effects of traffic.
- B. Major Components of the Complete System
 - 1. Grasspave2 units, assembled in rolls.
 - 2. Engineered sand and gravel base course.
 - 3. Hydrogrow soil amendment and fertilizer, supplied with Grasspave2.
 - 4. Sand fill or USGA greens mix.
 - 5. Selected grass from seed, hydroseeding/hydro-mulching, or sod.
 - 6. Selected topsoil (only for seeded installation).
 - 7. Mulch (needed only for seeded or hydroseeded installations).
- C. The Grasspave2 grass paving units, sand, and base course work together to support imposed loading.
- D. The Grasspave2 grass paving units, Hydrogrow, and sand fill contribute to vegetation support.

1.2 SUBMITTALS

- A. Submit under provisions of Section 01 30 00.
- B. Shop Drawings: Submit design detail showing proper cross-section.
- C. Samples: Submit manufacturer's sample of Grasspave2 10" x 10" section of Grasspave2 material.
- D. Installation Instructions: Manufacturer's printed installation instructions. Include methods for maintaining installed products.
- E. Certificates:
 - 1. Manufacturer signed certificate stating the product is made in the USA.
 - 2. Submit Material Certificates for base course and sand (or USGA mix) fill materials
 - 3. Product certificates signed by the manufacturer certifying material compliance of polyethylene used to make Grasspave2 units.
 - 4. ISO Certificate certifying manufacturer's quality management system is currently registered to ISO 9001:2008 quality standards.
- F. Substitutions: No material will be considered as an equivalent to the Grasspave2 unit specified herein unless it meets all areas of this specification without exception. Manufacturers seeking to supply what they represent as equivalent material must submit records, data, independent test results, samples, certifications, and documentation deemed necessary by the Specifier to prove equivalency.

- G. Manufacturer's Material Certification: Product manufacturers shall provide certification of compliance with all applicable testing procedures and related specifications upon written request. Request for certification shall be submitted by the purchasing agency no later than the date of order placement.
- H. Product manufacturers shall also have a minimum of 30 years' experience producing products for porous pavement systems.
- I. Manufacturer Quality Certification: ISO Certification certifying manufacturer's quality management system for its Grasspave2 system is currently registered to ISO 9001:2008 quality standards. Any alternate materials submitted shall provide a certification that their porous pavement system manufacturing process is part of an ISO program and a certification will be required specifically stating that their testing facility is certified and in accordance with ISO.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Protect Grasspave2 units/rolls from damage during delivery and store rolls upright, under tarp, to protect from sunlight, when time for delivery to installation exceeds one week.
- C. Store Hydrogrow in a dark and dry location
- D. Handling: Protect materials during handling and installation to prevent damage

1.4 MAINTENANCE SERVICE

- A. Installer responsible for maintenance of grass plants – water/irrigation, fertilizing, mowing – for one growing season. DO NOT AERATE. See *Grasspave2 Maintenance Guide* from Invisible Structures
- B. System to be maintained by The City of Orange Beach, after one growing season.

1.5 Project Conditions

- A. Maintain environmental conditions within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
- B. Do not begin installation of porous pavements until all hard surface paving adjacent to porous pavement areas, including concrete walks and asphalt paving, is completed.
- C. Install turf when ambient air temperatures is at least 55 degrees F (13 degrees C).
- D. In cold weather, do not use frozen materials or materials mixed or coated with ice or frost, and do not build on frozen base or wet, saturated or muddy subgrade.
- E. Protect partially completed paving against damage from other construction traffic when work is in progress.
- F. Adequately water sod or grass seed to assure germination of seed and growth of root system.
- G. Grass coverage on the sand-filled Grasspave2 rings must be completed within one week: See *Part 3 Execution*.
- H. DO NOT DRIVE, PARK ON, or use Grasspave2 system for two or three mowing cycles until grass root system has matured (about 3 to 4 weeks for sod or 6 to 8 weeks for seeded areas). Any barricades constructed must still be accessible by emergency and fire equipment during and after installation.

1.6 LIMITED WARRANTY

- A. Invisible Structures, Inc. (ISI) warrants to its purchasers that all products furnished by ISI will be free from defects in material and/or workmanship.
- B. This warranty shall be extended for a period of five (5) years following the date of shipment by ISI.
- C. Providing a written claim is presented to ISI within the warranty period and after inspection by ISI showing the materials have failed under this warranty, all defective materials shall be refurbished under this warranty, at no charge, excluding re-installation costs. This in lieu of all other warranties expressed or implied and is the sole warranty extended by ISI.
- D. Our liability under this warranty is limited to the refurbishing of materials and does not include any responsibility for incidental, consequential, or other damages of any nature.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Invisible Structures, Inc., which is located at: 1600 Jackson St. Suite 310 ; Golden, CO 80401; Toll Free Tel: 800-233-1510; Tel: 303-233-8383; Email: request_info@invisiblestructures.com; Web: www.invisiblestructures.com.
- B. Substitutions: See Section 1.2 (F)

2.2 GRASSPAVE2

- A. Composition:
 - 1. Manufactured in the USA.
 - 2. High density polyethylene (HDPE): 100 percent recycled materials.
 - 3. Color: black
 - 4. Color Uniformity: Uniform color throughout all units rolls.
 - 5. Carbon Black for ultraviolet light stabilization.
 - 6. Hydrogrow soil amendment and fertilizer, provided by manufacturer with Grasspave2.
- B. Performance Properties:
 - 1. Maximum Loading Capability: 15,940 psi (2.29 million psf, 109,906 kPa) when filled with sand.
 - 2. Wheelchair Access testing for ADA Compliance: Passing ASTM F 1951-08.
 - 3. Wheelchair Access testing for ADA Compliance: Passing Rotational Penetrometer testing.
 - 4. Tensile strength, pull-apart testing: 458 lbf/in from ASTM D638 Modified.
 - 5. System Permeability (Grasspave2, sand, base course): 2.63 to 38.55 inches of water per hour.
 - 6. Effective Imperviousness (E.I.): 10%.
- C. Dimensions (individual units are assembled and distributed into rolls):
 - 1. Roll area: From 108 sq ft (10 sq m) to 538 sq ft (50 sq m), in 108 sq ft (10 sq m) increments
 - 2. Roll Widths: From 3.3 ft (1 m) to 8.2 ft (2.5 m), in 1.6 ft (0.5 m) increments.
 - 3. Roll Lengths: From 32.8 ft (10m) to 65.6 ft (20 m), in 3.3 ft (1 m) increments.
 - 4. Roll Weights: From 41 lbs (19kg) to 205 lbs (93kg), in 41 lbs (19 kg) increments.
 - 5. Unit Nominal Width by Length: 20 inches by 20 inches (0.5 m by 0.5 m) or 40 inches by

- 40 inches (1 m by 1 m).
6. Nominal Depth: 1 inch (2.5 cm) – for rolls and individual units.
 7. Unit Weight: 18 oz (510 g) or 5 lbs. (2.27 kg).
 8. Volume Solid: 8 percent.

2.3 SYSTEM MATERIALS

- A. Base Course: Sandy gravel material from local sources commonly used for road base construction (recycled materials such as crushed concrete or crushed asphalt are NOT acceptable).
 1. Conforming to the following sieve analysis and requirements:
 - a. 100 percent passing sieve size 1 inch (25 mm).
 - b. 90-100 percent passing sieve size 3/4 inch (19 mm).
 - c. 70-80 percent passing sieve size 3/8 inch (9 mm).
 - d. 55-70 percent passing sieve size #4.
 - e. 45-55 percent passing sieve size #10.
 - f. 25-35 percent passing sieve size #40.
 - g. 3-8 percent passing sieve size #200.
 2. Provide a base course material nearly neutral in pH (range from 6.5 to 7.2) to provide adequate root zone development for turf.
 3. Material may be either "pit run" or "crusher run." Avoid using clay based crusher run/pit run. Crusher run material will generally require coarse, well-draining sand conforming to AASHTO M6 or ASTM C 33 to be added to mixture (20 to 30 percent by volume) to ensure long-term porosity.
 4. Alternative materials such as crushed shell, limerock, or crushed lava may be used for base course use, provided they are mixed with sharp sand (20 to 30 percent) to ensure long-term porosity, and are brought to proper compaction. Without added sand, crushed shell and limerock set up like concrete and become impervious.
 5. Alternative size and/or composition of base course materials should be submitted to Invisible Structures, Inc. (Manufacturer) for approval.
- B. Sand Fill for Rings and Spaces Between Rings: Clean sharp sand (washed concrete sand). Choose one of the following:
 1. Coarse, well-draining sand, such as washed concrete sand conforming to AASHTO M6 or ASTM C-33.
 2. United States Golf Association (USGA) greens, section - sand mix "The Root Zone Mixture."
- C. Turf Conditioner:
 1. Hydrogrow a proprietary soil amendment manufactured by Invisible Structures, Inc. and provided with Grasspave2.
 2. See Section 1.2 (F)
- D. Grass:
 1. Sod: [Bermuda]. Use rolled sod from a reputable local grower. Species should be wear resistant, free from disease, and in excellent condition. Sod shall be grown in sand or sandy loam soils only. Sod grown in soils of clay, silt, or high organic materials such as peat, will not be accepted.

PART 3 EXECUTION

3.1 INSPECTION

- A. Examine subgrade and base course installed conditions. Do not start porous paving installation until unsatisfactory conditions are corrected. Check for improperly compacted trenches, debris, and improper gradients.
- B. For fire lane installations: prior to installing base course for turf paving, obtain approval of local fire authorities of sub-base.
- C. Start of installation constitutes acceptance of existing conditions and responsibility for satisfactory performance. If existing conditions are found unsatisfactory, contact Architect for resolution.

3.2 PREPARATION

- A. Subgrade Preparation:
 - 1. Prepare subgrade as specified. Verify subgrade in accordance with porous paving system manufacturer's instructions.
 - 2. Proper subgrade preparation will enable the Grasspave2 rolls/units to connect properly and remain level and stationary after installation.
 - 3. Excavate area allowing for unit thickness, the engineered base depth (where required), and 0.5 inch (1.25 cm) for depth of sod root zone or topsoil germination area (when applicable).
 - 4. Provide adequate drainage from excavated area if area has potential to collect water, when working with in-place soils that have poor permeability.
 - 5. Ensure in-place soil is relatively dry and free from standing water.
 - 6. Uniformly grade base.
 - 7. Level and clear base of large objects, such as rocks and pieces of wood.
- B. Base Preparation:
 - 1. Install Base as specified. Verify engineered base (if required) is installed in accordance with porous paving system manufacturer's instructions.
 - 2. Coordinate base installation and preparation with subdrains specified.
 - 3. If required, place a geotextile separation layer between the natural ground and the 'engineered base'.
 - 4. If required, install the specified sub-drain and outlet according to construction drawings.
 - 5. Coordinate base installation and preparation with irrigation and drip irrigation lines specified.
 - 6. Place engineered base in lifts not to exceed 6 inches (150 mm), compacting each lift separately to 95 percent Modified Proctor.
 - 7. Leave 1 inch (2.5 cm) of depth below final grade for porous paver unit and sand fill and 0.5 inch (1.25 cm) for depth of sod root zone or topsoil germination area (when applicable).

3.3 HYDROGROW INSTALLATION

- A. Spread all Hydrogrow mix provided (spreader rate = 4.53 kg per 100 m² (10 lbs per 1076 ft²) evenly over the surface of the base course with a hand-held, or wheeled, rotary spreader.
- B. The Hydrogrow mix should be placed immediately before installing the Grasspave2.

3.4 GRASSPAVE2 INSTALLATION

- A. Install the Grasspave2 units by placing units with rings facing up, and using snap-fit connectors, pegs and holes, provided to maintain proper spacing and interlock the units. Units can be easily shaped with pruning shears or knife. Units placed on curves, slopes, and high traffic areas shall be anchored to the base course, using 40d common nails with fender washer, as required to secure units in place. Tops of rings shall be between 6 mm to 13 mm (0.25" to 0.5") below the surface of adjacent hard-surface pavements.
- B. Install sand in rings as they are laid in sections by "back-dumping" directly from a dump truck, or from buckets mounted on tractors, which then exit the site by driving over rings already filled with sand. The sand is then spread laterally from the pile using flat bottomed shovels and/or wide "asphalt rakes" to fill the rings. A stiff bristled broom should be used for final "finishing" of the sand. The sand must be "compacted" by using water from hose, irrigation heads, or rainfall, with the finish grade no less than the top of rings and no more than 6 mm (0.25") above top of rings.

3.5 INSTALLATION OF GRASS

- A. Grass coverage on the sand-filled rings must be completed within one week. Sand must be re-installed and leveled and Grasspave2 checked for integrity if rings become exposed due to wind, rain, traffic, or other factors. (Choose one paragraph below to meet grass installation method desired.)
 - 1. Install thin sod directly over sand filled rings, filled no higher than the top of the rings. Sod strips should be placed with very tight joints. Sodded areas must be fertilized and kept moist during root establishment (minimum of 3 weeks). **DO NOT DRIVE ON SYSTEM:** Sodded areas must be protected from any traffic, other than emergency vehicles, for a period of 3 to 4 weeks, or until the root system has penetrated and established well below the Grasspave2 units.
- B. Adequately water sod or grass seed to assure germination of seed and growth of root system.

3.6 PROTECTION

- A. Sodded areas must be protected from any traffic, other than emergency vehicles, for a period of 3 to 4 weeks, or until the root system has penetrated below the Grasspave2 units.

3.7 FIELD QUALITY CONTROL

- A. Remove and replace segments of Grasspave2 units where three or more adjacent rings are broken or damaged, reinstalling as specified, so no evidence of replacement is apparent.
- B. Perform cleaning during the installation of work and upon completion of the work. Remove all excess materials, debris, and equipment from site. Repair any damage to adjacent materials and surfaces resulting from installation of this work.

3.8 MAINTENANCE

- A. Maintain grass in accordance with manufacturer's instructions.
- B. Lawn Care: Normal turf care procedures should be followed, including de-thatching.
- C. **DO NOT AERATE.** Aerator will damage the Grasspave2 units. Aeration is not necessary in a sand root zone.

